

Attachment A – MDE Correspondence



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Lieutenant Governor

Shari T. Wilson
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Robert M. Summers, Ph.D.
Deputy Secretary

June 11, 2007

Christopher M. French, R.G., C.E.G., R.E.A.
Manager, Remediation & Evaluation Services
Honeywell International Inc.
101 Columbia Road
Morristown, NJ 07962-1139

Re: Response Action for McComas Street Properties

Dear Mr. French:

The Maryland Department of the Environment (MDE) has received the laboratory analysis for the surface soil samples collected from 201, 207 and 209 West McComas Street. The analytical results are enclosed with this letter.

MDE has determined that arsenic levels are sufficiently high that a remedial action must be performed. MDE is requiring that Honeywell gain access to the impacted properties for the purpose of removing contaminated soil (no less than three inches depth), vacuum loose dust from the backyard, and replace soil with clean soil or concrete.

If you have any questions, please contact Mr. Jim Carroll, Program Administrator of the Waste Management Administration's Land Restoration Program at (410) 537-3437 or me at (410) 537-3304.

Sincerely,

Horacio Tablada, Director
Waste Management Administration

Enclosure

cc: Mr. Ronald Nelson
Mr. James Carroll
Mr. Arthur O'Connell
Mr. Brian Dietz
Ms. Peggy Smith



Attachment B – Photographic Log



Pre-construction
site conditions view
from west to east.



View looking from
east to west after
fence removal.



Stake out of soils
after vegetation
removal



View from west to
east during soil
excavation



View from west to east during preparation for construction of curbs.



View west to east after clean crusher run installed and rebar for concrete pads being constructed.



View from west to
east of crusher run
base



Poured concrete
patios view from
west to east.



View of alleyway
after installation of
new fence

Attachment C – Health and Safety Plan

Health and Safety Plan

Residential Remedial Action

**For the
Private Residences
Located at McComas Street
Baltimore, Maryland**

Prepared for
Honeywell International Inc.

August 2008

Prepared by



HEALTH AND SAFETY PLAN

Private Residences
Mc Comas Street
Baltimore, Maryland

PHONE

Project Manager: Bob Steele 703-830-9780 & 703-625-1780

Construction Project Manager: Kevin Flynn/NJO 215-859-2621

Safety Coordinator (SC): Joe Murphy/HRO 757-262-7597

Honeywell H&S Program Manager (HSPM): Bill Berlett 773-693-3800 x-316
Cell: 847-770-0209

Project H&S Manager (HSM): Bill Berlett/CHI 773-693-3800 x 316

Preparation Date: August 1, 2008

Expiration Date: December 31, 2008

APPROVALS

Project Manager:



8-1-08

(DATE)

Honeywell Program or Project Health and Safety Manager:



CIH/CSP

August 1, 2008

(DATE)

This Health and Safety Plan is valid only for this specific project as described in Section 3.0. It is not to be used for other projects or subsequent phases of this project without the written approval of the Honeywell Program Health and Safety Manager. **A copy of this plan is to be maintained at the site at all times.**

Change Management Form

Honeywell Project HS&E Change Management Form

*This evaluation form should be reviewed on a **continuous** basis to determine if the current site health and safety plan adequately addresses ongoing project work, and should be completed whenever new tasks are contemplated or changed conditions are encountered.*

Project Task: Remedial Construction
 Project Number: 374636.SP.52.00 Project/Task Manager: Bob Steele WDC
 Name: 209 McComas Street Safety Coordinator Dave Wilder
 Baltimore, Maryland

<i>Evaluation Checklist</i>		Yes	No	TBD
1.	Have the CH2MHILL staff listed in the original HSP/FSI changed?	X		
2.	Has a new subcontractor been added to the project?			X
3.	Is any chemical or product to be used that is not listed in Attachment 2 of the plan?		X	
4.	Have additional tasks been added to the project, which were not originally addressed in the plan?		X	
5.	Have new contaminants or higher than anticipated levels of original contaminants been encountered?		X	
6.	Have other safety, equipment, activity or environmental hazards been encountered that are not addressed in the plan?		X	

If the answer is "YES" to Question 3, an HSP/FSI revision is NOT needed. Please take the following actions:

- ◆ Add the chemical to Attachment 2;
- ◆ Ensure employees handling the chemical are trained; and
- ◆ Ensure training documentation is added to Attachment 3.

If the answer is "YES" to Questions 1, 2 or 4-6, an HSP/FSI revision MAY BE NEEDED. Please contact Bill Berlett (773-693-3800 x316) directly.

Emergency Contacts

24-hour CH2M HILL Emergency Beeper – (720) 286-4911 CH2M HILL Occupational Health Nurse – 1-800-756-1130

Medical Emergency – 911 Fire/Spill Emergency -- 911 Security & Police – 911 Local Facility Emergency Response Number: N/A	CH2M HILL Medical Consultant Health Resources Dr. Jerry H. Berke, M.D., M.P.H. 600 West Cummings Park, Suite 3400 Woburn, MA 01801-6350 1-781-938-4653 (8 am to 11 pm EST) 1-800-350-4511 (after hours and on weekends) (After hours calls will be returned within 20 minutes)
Client Contact Name: Chris French Company: Honeywell Title: Remediation Manager Phone: 973-455-4131	Public Relations Contact Name: Sibyl Dinkins Company: CH2M Hill Title: Communications Specialist Phone: 410-869-2811
Honeywell Health, Safety & Environment Program/Site Manager (HSPM) Name: Bill Berlett/CHI Phone: 773-693-3800 x 316 Cell: 847-770-0209 Fax: 773-693-3823	Environmental Compliance Coordinator (ECC) Name: Linda Hickok/SYR Phone: (315) 422-7250 x229
Project Manager Name: Bob Steele Cell: 703-625-1780 Office: 703-830-9780	Safety Coordinator (SC) Name: Joe Murphy/HRO Phone: 757-262-7597 Cell:
Construction Manager (PM) Name: Kevin Flynn Phone: 973-316-0159 Cell Phone: 215-859-2621	Regional Human Resources Department (Workers' Compensation Contact) Name: Cindy Bauder/WDC Phone: 703/471-6405 ext. 4243
Federal Express Dangerous Goods Shipping Phone: 800/238-5355 CH2M HILL Emergency Number for Shipping Dangerous Goods Phone: 800/255-3924	Worker's Compensation: Contact Regional HR dept. to have form completed or contact Albert Jerman after hours: 303-741-5927 Automobile Accidents: Rental: Linda Anderson/DEN 720-286-2401 CH2M HILL owned vehicle: Zurich Insurance Co. 800-987-3373
Facility Alarms: N/A	Evacuation Assembly Area(s): TBD by SC
Facility/Site Evacuation Route(s): TBD by SC	











Hospital Name/Address:

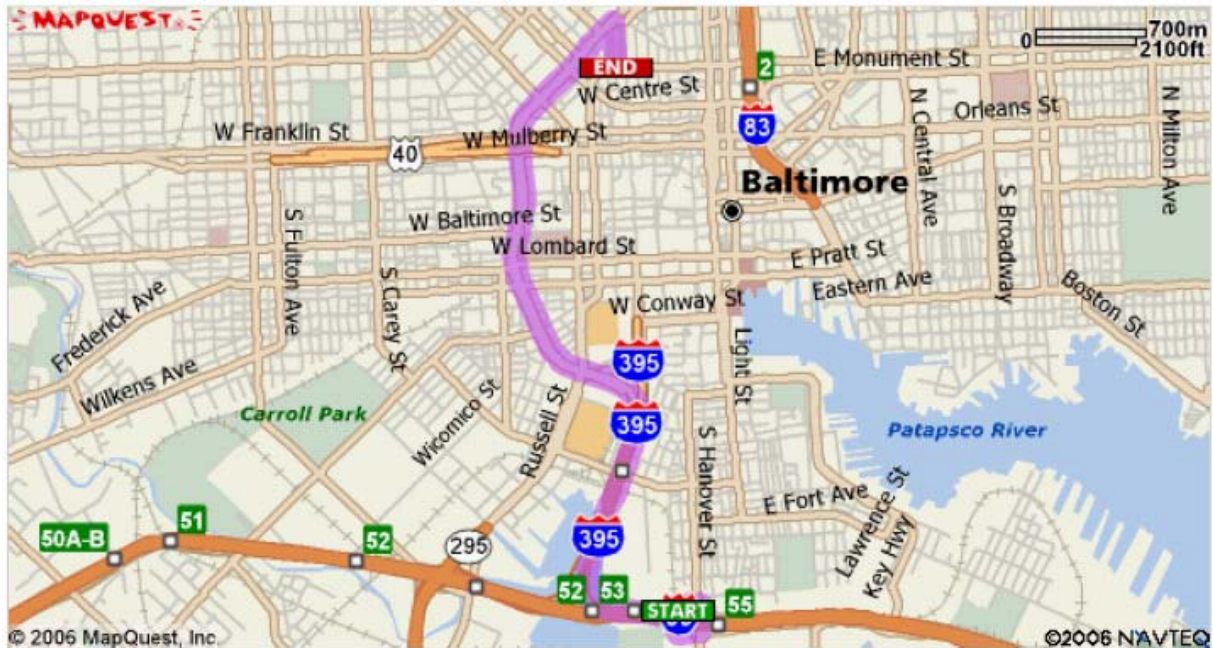
Directions to Hospital

Maryland General Hospital

827 Linden Avenue – Baltimore, Maryland

Phone: 410-225-8000

Directions	Distance
Total Est. Time: 7 minutes Total Est. Distance: 3.52 miles	
 1: Start out going SOUTH on RACE ST toward W MCCOMAS ST.	<0.1 miles
 2: Turn LEFT onto W MCCOMAS ST.	<0.1 miles
 3: Turn LEFT onto MD-2 / S HANOVER ST.	<0.1 miles
 4: Merge onto I-95 S toward I-395 / WASHINGTON / DOWNTOWN.	0.3 miles
 5: Merge onto I-395 N via EXIT 53 toward DOWNTOWN / M L KING BLVD.	0.5 miles
 6: Take the M.L. KING JR. BLVD exit.	0.3 miles
 7: Turn SLIGHT LEFT onto MARTIN LUTHER KING JR BLVD.	1.8 miles
 8: Stay STRAIGHT to go onto W READ ST.	<0.1 miles
 9: Turn RIGHT onto LINDEN AVE.	0.1 miles
 10: End at Maryland General Hospital: 827 Linden Ave, Baltimore, MD 21201, US	
Total Est. Time: 7 minutes Total Est. Distance: 3.52 miles	



Start:
2000 Race St
 Baltimore, MD 21230, US

End:
Maryland General Hospital:
 410-225-8000
 827 Linden Ave, Baltimore, MD 21201,
 US



Site Map

This page is reserved for a Site Map.

Note locations of Support, Decontamination, and Exclusion Zones; site telephone; first aid station; evacuation routes; and assembly areas.

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Attachments

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2	Job Hazard Analysis
3	Daily Tailgate Safety Briefing Form
4	Pre-Task Safety Plan
5	Project Activity Self-Assessment Checklists
6	Safe Work Observation Form
7	Project-Specific Chemical Product Hazard Communication Form
8	Applicable Material Safety Data Sheets
9	Chemical-Specific Training Form
10	Biological Hazard Information
11	Drug Testing Hospital Kit Notice
12	Incident Report Form and Root Cause Investigation Information

Acronyms and Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
APR	air-purifying respirator
As	Arsenic
cm	centimeter
CNS	central nervous system
COPC	chemical of potential concern
CPR	cardiopulmonary resuscitation
dBA	decibel (A-weighted scale)
DEET	N,N-diethyl-meta-toluamide
DOT	Department of Transportation
ECC	Environmental Compliance Coordinator
GFCI	ground fault circuit interrupter
Hazwoper	Hazardous waste operations and emergency response
Honeywell	Honeywell International Inc.
HR	heart rate
HS&E	health, safety, and environment
HSM	Health and Safety Manager
HSPM	Health and Safety Program Manager
IDLH	immediately dangerous to life and health
IRF	incident report form
JHA	job hazard analysis
LID	Legal and Insurance Department
MSDS	material safety data sheet
NIOSH	National Institute for Occupational Safety and Health
NSC	National Safety Council
OSHA	Occupational Safety and Health Administration

PAPR	powered air-purifying respirator
PEL	permissible exposure limit
PFD	personal flotation device
PIP	photoionization potential
PM	Project Manager
PPE	personal protective equipment
ppm	parts per million
PTSP	pre-task safety plan
RES	Remediation and Environmental Services
RQ	reportable quantity
SC	Safety Coordinator
SCBA	self-contained breathing apparatus
SOP	standard of practice
SPCC	spill prevention, control, and countermeasures
SSR	Subcontractor Safety Representative
TLV	threshold limit value
TSDF	treatment, storage, and disposal facility

1.0 Introduction

1.1 About This Document

This Health, Safety and Environment (HS&E) Plan will be kept on the site during all field activities conducted under the Honeywell International Inc. (Honeywell) Alliance program. The plan will be amended or revised as project activities or conditions change or when supplemental information becomes available. The plan adopts, by reference, the Standards of Practice (SOPs) in the CH2M HILL *Health, Safety, and Environmental Protection (HS&E) Program Manual*. In addition, this plan adopts procedures in the project Work Plan and incorporates applicable elements of Honeywell's HS&E requirements. The Safety Coordinator (SC) is to be familiar with the SOPs contained in the HS&E Program Manual and the contents of this plan. The project Health and Safety Manager (HSM) must review and approve any changes to this plan.

CH2M HILL personnel and subcontractors must sign the CH2M HILL Employee Sign-Off Form included in Attachment 1 after reading/reviewing this HS&E Plan.

1.2 Site Background

The Site is situated in a residential area that consists of seven (7) row homes, which comprise the McComas street site. Based upon sampling performed at three homes by the Maryland Department of the Environment (MDE), surface soil samples present levels of arsenic above the State of Maryland residential standards. Lead has also been detected above residential standards. The MDE has directed that the soils be removed to a depth of three inches. Honeywell is prepared, on a voluntary basis, to immediately commence work to remove the concrete paving, at least three inches of soil from the back yards, vacuum loose dust and place clean soil into the excavation, construct concrete patios, and restore the properties, including the planting of grass and other landscaping.

1.3 Description of Tasks

Refer to project documents (e.g., project Work Plan) for detailed task information. A task hazard analysis has been performed for each task and is included below while project-specific hazard controls are provided in the next section. Tasks other than those listed below require an approved amendment or revision to this plan before tasks begin. Refer to Hazwoper Compliance Plan Section of this HS&E Plan for procedures related to "clean" tasks that do not involve hazardous waste operations and emergency response (Hazwoper).

1.3.1 Hazwoper-Regulated Tasks

The following tasks are regulated under the Health and Safety Code (H&SC), Section 1910.120.

- Management of all Subcontractors and vendor activities onsite during the execution of the construction phases of work.
- Site preparation, including protecting designated vegetation and preparation of staging area.
- Dust will be vacuumed and removed prior to and during excavation activities using equipment equipped with a HEPA particulate filter.
- Removal of existing concrete patios and common line fence
- Excavation of a nominal depth of three inches of soil underneath the concrete patios.
- Containerization, characterization and transportation of excavated soil and concrete to a licensed landfill designated by Honeywell. Honeywell will contract with the landfill and pay for landfill disposal fees directly
- Backfill of excavated area with structural fill.
- Restoration of excavated surfaces with a concrete patio, fencing and other amenities.

Non-Hazwoper-Regulated Tasks

Under specific circumstances, the training and medical monitoring requirements of federal or state Hazwoper regulations are not applicable. It must be demonstrated that the tasks can be performed without the possibility of exposure in order to use non-Hazwoper-trained personnel. The following tasks are considered non-hazardous.

- Site visits prior to the initiation of construction activities to meet with property owners and survey the properties.
- Site visits that do not include entry into exclusion zones during construction.
- Installation of concrete patios and steps
- Installation of fence

1.3.2 Environmental-Regulated Tasks and Conditions

Project tasks and site conditions that can impact the environment and are otherwise subject to environmental regulation are included in Section 1.3. These items are also known as the environmental aspects of the project (activities that can interact with the environment). Environmental impacts relating to each task or condition are also presented in Section 1.3, which is used to evaluate the project's significant impacts and control measures specified in Hazard Controls and Safe Work Practices section of this HS&E Plan.

All personnel shall: (1) implement control measures described in Hazard Control Section; (2) obtain appropriate environmental training (e.g., Waste Management or Dangerous Goods Shipping) and (3) seek assistance from the regional Environmental Compliance Coordinator (ECC) for all environmental questions or issues.

1.3.3 Honeywell Permit Required Tasks

The following tasks require a Honeywell permit:

None required at this time.

1.4 Task Hazard Analysis

Table 1-1 presents the hazard analysis for work to be conducted under this HS&E Plan.

1.5 Environmental Impacts

Table 1-2 summarizes the potential environmental impacts of the work to be conducted under this HS&E Plan.

TABLE 1-1
Task Hazard Analysis Table

Tasks	POTENTIAL HAZARDS (Refer to Hazard Control Section for additional information)																					
	Aerial Lifts	Back Injury (Bending/Lifting)	Biological Hazards	Buried Utilities	Cold Stress	Confined Space Entry	Electrical	Elevated Work Areas/Falls	Entanglement	Excavations	Fires	Flying Debris/Objects	Gas Cylinders	Hand and Power Tools	Heat Stress	Heavy Equipment Exposure	Ionizing Radiation	Lockout-Tagout	Noise	Radio-Frequency Radiation	Respiratory Protection	Slips, Trips and Falls
Excavation – residential properties – cap materials		X	X	X			X			X		X	X	X	X	X			X			X
Site Preparation – Clearing, removal of miscellaneous materials, fence removal		X	X				X					X	X	X	X	X			X			X
Site Restoration – backfilling, re-vegetating, fence replacement, etc.		X	X	X			X					X	X	X	X	X			X			X
Surveying		X	X				X							X	X				X			X
Sampling for Waste Disposal		X	X									X		X	X	X			X			X
Observation of loading material for offsite disposal			X									X			X	X			X		X	X
Remediation & construction oversight			X									X	X		X	X			X		X	X

TABLE 1-2
Environmental Impacts Table

Tasks/Conditions	Impacts						
	Air Pollution	Land Pollution	Land Disposal	Noise Pollution	Water Pollution	Resource Depletion	Human Hazard
Potential Lead-containing soil	X	X	X				X
Chemical/Petroleum Storage or Transport	X	X			X		X
Excavate, Clearing or Grading	X	X		X			
Waste (Haz/Non-Haz) Mgmt, Transport and Disposal	X	X	X		X		X

2.0 Hazard Controls and Safe Work Practices

This section provides safe work practices and control measures used to reduce or eliminate potential hazards. These practices and controls are to be implemented by the party in control of either the site or the particular hazard. CH2M HILL employees and subcontractors must remain aware of the hazards affecting them regardless of who is responsible for controlling the hazards. CH2M HILL employees and subcontractors who do not understand any of these provisions should contact the SC for clarification. In addition to the hazard controls specified in this section, the following are required for Honeywell projects.

2.1 Administrative Controls

2.1.1 HS&E Plans

CH2M HILL requires HS&E plans for all field projects and subcontractors are required to submit detailed Job Hazard Analysis for their activities. The HS&E plan provides a risk analysis of each task and identifies the potential hazards and control measures (including personal protective equipment (PPE) and air monitoring requirements) for each task.

2.1.2 Job Hazard Analysis

A job hazard analysis (JHA) is required by CH2M HILL for all tasks unless the HSM specifically determines it is unnecessary. The JHA provides a step-by-step analysis of the activity being performed and identifies the equipment and control measures necessary to conduct the work safely. Each JHA must be reviewed by the work team immediately prior to conducting the work. The JHA can be a source of information for the daily safety meeting. Project-specific JHAs are provided in Attachment 2.

2.1.3 Safety Meetings

CH2M HILL requires that the safety coordinator conduct daily safety meetings to discuss with the field team the task to be performed that day and the potential hazards and mitigation measure. The safety meeting can be used to review the JHA with the team. A Daily Tailgate Safety Briefing Form is included in Attachment 3.

A Pre-Task Safety Plan (PTSP) must be developed each day prior to performing specific work tasks. Each member of the team performing the task must be included in the planning so all are aware of the task hazards and controls. A copy of a PTSP is included in Attachment 4.

2.1.4 Self-Assessments

Project Activity Self-Assessment Checklists are contained in Attachment 5. These checklists provide a method of verifying compliance with established safe work practices, regulations,

and industry standards pertaining to hazardous activities. The checklists can be used by any CH2M HILL employee who may be exposed to a hazardous activity or by the SC when providing oversight of a subcontractor performing a hazardous activity. Self-assessments shall be completed prior to subjecting CH2M HILL staff to hazardous operations for any reason.

Self-assessment checklists should be completed every week during excavation activities.

If hazardous conditions exist or are apparent during the self-assessment, immediately notify the employees in the area and do not continue work in that area until the conditions are safe. If an imminent danger situation (immediately life threatening or would cause serious injury) exists, immediately stop work, warn all personnel in danger and notify the appropriate safety representative and the CH2M HILL SC. Non-compliance issues identified during the self-assessment shall be immediately rectified. If corrective action assistance is required, the HSM should be contacted for guidance.

Any site-specific requirements outlined in this HS&E Plan that are more stringent than those contained in the self-assessment checklists are to take precedence. The self-assessment checklists are based upon minimum regulatory compliance and some site-specific requirements may be more stringent. The self-assessment checklists, including documented corrective actions, shall be made part of the permanent project records and maintained by the SC.

2.1.5 Site Compliance/Audits

In order to ensure compliance with requirements contained in the Honeywell Remediation and Environmental Services (RES) Health and Safety Manual, Specification 01620, and with this HS&E Plan, audits will be conducted by a HS&E professional as follows: a minimum of once during project activities.

2.1.6 Interventions

Honeywell requires that we intervene whenever we see someone exhibiting an unsafe behavior or working in unsafe conditions. When such a situation is observed, an intervention is performed by talking to the person about how the task could be done more safely. Safe Work Observation forms must be completed on a weekly basis, at a minimum, by the SC or FTL. Each completed form must be maintained with the HS&E Plan field documents, and then transferred to project files upon the completion of the field work. A copy of a Safe Work Observation form is included in Attachment 6.

2.2 Project-Specific Hazards and Controls

The following sections describe potential hazards and control measures that may be encountered during site activities.

2.2.1 Respiratory Protection

The use of respiratory protection is not anticipated during this project. However, if site conditions warrant, the following requirements for respiratory protection will include:

- Respirator users must have completed appropriate respirator training within the past 12 months. Level C training is required for air-purifying respirators (APR) use and Level B training is required for supplied-air respirators (SAR) and self-contained breathing apparatus (SCBA) use. Specific training is required for the use of powered air-purifying respirators (PAPR).
- Respirator users must complete the respirator medical monitoring protocol and been approved for the specific type of respirator to be used.
- Tight-fitting face piece respirator (negative or positive pressure) users must have passed an appropriate fit test within past 12 months.
- Respirator use shall be limited to those activities identified in this plan. If site conditions change, the HSM shall be notified to amend the respiratory protection requirements.
- Tight-fitting face piece respirator users shall be clean-shaven and shall perform a user seal check before each use.
- Canisters/cartridges shall be replaced according to the change-out schedule specified in this plan. Respirator users shall notify the SC of any detection of vapor or gas breakthrough. The SC shall report any breakthrough events to the HSM.
- Respirators in regular use shall be inspected before each use and during cleaning
- Respirators in regular use shall be cleaned and disinfected as often as necessary to ensure they are maintained in a clean and sanitary condition.
- Respirators shall be properly stored to protect against contamination and deformation.
- Field repair of respirators shall be limited to routine maintenance. Defective respirators shall be removed from service.
- When breathing air is supplied by cylinder or compressor, the SC shall verify the air meets Grade D air specifications.
- The SC shall complete the H&S Self-Assessment Checklist – Respiratory Protection included in Attachment 5 of this plan to verify compliance with CH2M HILL’s respiratory protection program.

Refer to CH2M HILL HSE SOP-121, Respiratory Protection, for additional information.

2.2.2 Exposure to Public Vehicular Traffic

The following precautions must be taken when working around traffic, and in or near an area where traffic controls have been established by a contractor.

- Exercise caution when exiting traveled way or parking along street – avoid sudden stops, use flashers, etc.
- Park in a manner that will allow for safe exit from vehicle, and where practicable, park vehicle so that it can serve as a barrier.

- All staff working adjacent to traveled way or within work area must wear reflective/high-visibility safety vests.
- Eye protection should be worn to protect from flying debris.
- Remain aware of factors that influence traffic related hazards and required controls – sun glare, rain, wind, flash flooding, limited sight-distance, hills, curves, guardrails, width of shoulder (i.e., breakdown lane), etc.
- Always remain aware of an escape route -- behind an established barrier, parked vehicle, guardrail, etc.
- Always pay attention to moving traffic – never assume drivers are looking out for you
- Work as far from traveled way as possible to avoid creating confusion for drivers.
- When workers must face away from traffic, a “buddy system” should be used, where one worker is looking towards traffic.
- When working on highway projects, obtain a copy of the contractor’s traffic control plan.
- Work area should be protected by a physical barrier – such as a K-rail or Jersey barrier.
- Review traffic control devices to ensure that they are adequate to protect your work area. Traffic control devices should: 1) convey a clear meaning, 2) command respect of road users, and 3) give adequate time for proper traffic response. The adequacy of these devices are dependent on limited sight distance, proximity to ramps or intersections, restrictive width, duration of job, and traffic volume, speed, and proximity.
- Either a barrier or shadow vehicle should be positioned a considerable distance ahead of the work area. The vehicle should be equipped with a flashing arrow sign and truck-mounted crash cushion. All vehicles within 40 feet of traffic should have an orange flashing hazard light atop the vehicle.
- Except on highways, flaggers should be used when 1) two-way traffic is reduced to using one common lane, 2) driver visibility is impaired or limited, 3) project vehicles enter or exit traffic in an unexpected manner, or 4) the use of a flagger enhances established traffic warning systems.
- Lookouts should be used when physical barriers are not available or practical. The lookout continually watches approaching traffic for signs of erratic driver behavior and warns workers. Vehicles should be parked at least 40 feet away from the work zone and traffic. Minimize the amount of time that you will have your back to oncoming traffic.

Refer to CH2M HILL HSE SOP-216, Traffic Control, for additional information.

2.2.3 Noise Hazards

Previous surveys indicate that heavy equipment such as drilling or excavation equipment may produce continuous and impact noise at or above the action level of 85 decibels (dBA).

All CH2M HILL personnel within 25 feet of operating equipment, or near an operation that creates noise levels high enough to impair conversation, shall wear hearing protective devices (either muffs or plugs). Personnel will wash their hands with soap and water prior to inserting ear plugs to avoid initiating ear infections.

Refer to CH2M HILL HSE SOP-108, Hearing Conservation Program, for additional information.

Refer to CH2M HILL HSE SOP-216, Traffic Control, for additional information.

2.2.4 Excavation

(Reference CH2M HILL SOP HS-32, Excavations)

Excavation depths expected during this project will be approximately 8 inches below ground surface. If site conditions change and deeper excavations are conducted the following will apply.

- Do not enter the excavations unless completely necessary, and only after the competent person has completed the daily inspection and has authorized entry.
- Follow all excavation entry requirements established by the competent person.
- Do not enter excavations where protective systems are damaged or unstable.
- Do not enter excavations where objects or structures above the work location may become unstable and fall into the excavation.
- Do not enter excavations with the potential for a hazardous atmosphere until the air has been tested and found to be at safe levels.
- Do not enter excavations with accumulated water unless precautions have been taken to prevent excavation cave-in.
- H&S Self-Assessment Checklist – Excavations, found in Attachment 5 of this plan, should be used to evaluate excavations prior to entry.

2.2.5 Earthmoving Equipment

(Reference CH2M HILL SOP HSE-306, *Earthmoving Equipment*)

- Only authorized personnel are permitted to operate earthmoving equipment.
- Maintain safe distance from operating equipment and stay alert of equipment movement. Avoid positioning between fixed objects and operating equipment and equipment pinch points, remain outside of the equipment swing and turning radius. Pay attention to backup alarms, but not rely on them for protection. Never turn your back on operating equipment.
- Approach operating equipment only after receiving the operator's attention. The operator shall acknowledge your presence and stop movement of the equipment. Caution shall be used when standing next to idle equipment; when equipment is placed in gear it can lurch forward or backward. Never approach operating equipment from the side or rear where the operator's vision is compromised.

- When required to work in proximity to operating equipment, wear high-visibility vests to increase visibility to equipment operators. For work performed after daylight hours, vests shall be made of reflective material or include a reflective stripe or panel.
- Do not ride on earthmoving equipment unless it is specifically designed to accommodate passengers. Only ride in seats that are provided for transportation and that are equipped with seat belts.
- Stay as clear as possible of all hoisting operations. Loads shall not be hoisted overhead of personnel.
- Earthmoving equipment shall not be used to lift or lower personnel.
- If equipment becomes electrically energized, personnel shall be instructed not to touch any part of the equipment or attempt to touch any person who may be in contact with the electrical current. The utility company or appropriate party shall be contacted to have line de-energized prior to approaching the equipment.

2.3 General Hazards and Controls

2.3.1 General Practices and Housekeeping

General “good housekeeping” practices include:

- Site work should be performed during daylight hours whenever possible. Work conducted during hours of darkness requires enough illumination intensity to read a newspaper without difficulty.
- Good housekeeping must be maintained at all times in all project work areas.
- Common paths of travel should be established and kept free from the accumulation of materials.
- Keep access to aisles, exits, ladders, stairways, scaffolding, and emergency equipment free from obstructions.
- Provide slip-resistant surfaces, ropes, and/or other devices to be used.
- Specific areas should be designated for the proper storage of materials.
- Tools, equipment, materials, and supplies shall be stored in an orderly manner.
- As work progresses, scrap and unessential materials must be neatly stored or removed from the work area.
- Containers should be provided for collecting trash and other debris and shall be removed at regular intervals.
- All spills shall be quickly cleaned up. Oil and grease shall be cleaned from walking and working surfaces.

Refer to CH2M HILL HSE SOP-209, General Practices, for additional information.

2.3.2 Hazard Communication

The SC is to perform the following:

- Complete an inventory of chemicals brought to the site by CH2M HILL using Attachment 7.
- Confirm that an inventory of chemicals brought on site by CH2M HILL subcontractors is available.
- Request or confirm locations of Material Safety Data Sheets (MSDSs) from the client, contractors, and subcontractors for chemicals to which CH2M HILL employees potentially are exposed.
- Copies of all applicable MSDSs will be placed in Attachment 8.
- Before or as the chemicals arrive on site, obtain an MSDS for each hazardous chemical.
- Label chemical containers with the identity of the chemical and with hazard warnings, and store properly.
- Give employees required chemical-specific hazard communication training using Attachment 9.
- Store all materials properly, giving consideration to compatibility, quantity limits, secondary containment, fire prevention, and environmental conditions.

Refer to CH2M HILL HSE SOP-107, Hazard Communication, for additional information.

2.3.3 Shipping and Transportation of Chemical Products

Chemicals brought to the site might be defined as hazardous materials by the U.S. Department of Transportation (DOT). All staff who ship the materials or transport them by road must receive CH2M HILL training in shipping dangerous goods. All hazardous materials that are shipped (e.g., via Federal Express) or are transported by road must be properly identified, labeled, packed, and documented by trained staff. Contact the HSM or the Equipment Coordinator for additional information.

Refer to CH2M HILL's Procedures for Shipping and Transporting Dangerous Goods for additional information.

2.3.4 Lifting

Proper lifting techniques must be used when lifting any object:

- Plan storage and staging to minimize lifting or carrying distances.
- Split heavy loads into smaller loads.
- Use mechanical lifting aids whenever possible.
- Have someone assist with the lift -- especially for heavy or awkward loads.
- Make sure the path of travel is clear prior to the lift.

Refer to CH2M HILL HSE SOP-112, Lifting, for additional information.

2.3.5 Fire Prevention

Fire prevention measures include the following:

- Fire extinguishers shall be provided so that the travel distance from any work area to the nearest extinguisher is less than 100 feet. When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet. Extinguishers must:
 - be maintained in a fully charged and operable condition,
 - be visually inspected each month, and
 - Undergo a maintenance check each year.
- The area in front of extinguishers must be kept clear.
- Post “Exit” signs over exiting doors, and post “Fire Extinguisher” signs over extinguisher locations.
- Combustible materials stored outside should be at least 10 feet from any building.
- Solvent waste and oily rags must be kept in a fire resistant, covered container until removed from the site.
- Flammable/combustible liquids must be kept in approved containers, and must be stored in an approved storage cabinet.

Refer to CH2M HILL HSE SOP-208, Fire Prevention, for additional information.

2.3.6 Electrical

Electrical safety measures include:

- Only qualified personnel are permitted to work on unprotected energized electrical systems.
- Only authorized personnel are permitted to enter high-voltage areas.
- Do not tamper with electrical wiring and equipment unless qualified to do so. All electrical wiring and equipment must be considered energized until lockout/tagout procedures are implemented.
- Inspect electrical equipment, power tools, and extension cords for damage prior to use. Do not use defective electrical equipment, remove from service.
- All temporary wiring, including extension cords and electrical power tools, must have ground fault circuit interrupters (GFCIs) installed.
- Extension cords must be:
 - Equipped with third-wire grounding.
 - Covered, elevated, or protected from damage when passing through work areas.

- Protected from pinching if routed through doorways.
- Not fastened with staples, hung from nails, or suspended with wire.
- Electrical power tools and equipment must be effectively grounded or double-insulated UL approved.
- Operate and maintain electric power tools and equipment according to manufacturers' instructions.
- Maintain safe clearance distances between overhead power lines and any electrical conducting material unless the power lines have been de-energized and grounded, or where insulating barriers have been installed to prevent physical contact. Maintain at least 10 feet from overhead power lines for voltages of 50 kV or less, and 10 feet plus ½ inch for every 1 kV over 50 kV.
- Temporary lights shall not be suspended by their electric cord unless designed for suspension. Lights shall be protected from accidental contact or breakage.
- Protect all electrical equipment, tools, switches, and outlets from environmental elements.

Refer to CH2M HILL HSE SOP-206, Electrical, for additional information.

2.3.7 Stairways and Ladders

Safety guidelines pertaining to stairways and ladders include the following:

- Stairway or ladder is generally required when a break in elevation of 19 inches or greater exists.
- Personnel should avoid using both hands to carry objects while on stairways; if unavoidable, use extra precautions.
- Personnel must not use pan and skeleton metal stairs until permanent or temporary treads and landings are provided the full width and depth of each step and landing.
- Ladders must be inspected by a competent person for visible defects prior to each day's use. Defective ladders must be tagged and removed from service.
- Ladders must be used only for the purpose for which they were designed and shall not be loaded beyond their rated capacity.
- Only one person at a time shall climb on or work from an individual ladder.
- User must face the ladder when climbing; keep belt buckle between side rails
- Ladders shall not be moved, shifted, or extended while in use.
- User must use both hands to climb; use rope to raise and lower equipment and materials
- Straight and extension ladders must be tied off to prevent displacement

- Ladders that may be displaced by work activities or traffic must be secured or barricaded
- Portable ladders must extend at least 3 feet above landing surface
- Straight and extension ladders must be positioned at such an angle that the ladder base to the wall is one-fourth of the working length of the ladder
- Stepladders are to be used in the fully opened and locked position
- Users are not to stand on the top two steps of a stepladder; nor are users to sit on top or straddle a stepladder
- Fixed ladders ≥ 24 feet in height must be provided with fall protection devices.
- Fall protection should be considered when working from extension, straight, or fixed ladders greater than six feet from lower levels and both hands are needed to perform the work, or when reaching or working outside of the plane of ladder side rails.

Refer to CH2M HILL HSE SOP-214, Stairways and Ladders, for additional information.

2.3.8 Heat Stress

Prevention measures to avoid heat stress include:

- Drink 16 ounces of water before beginning work. Disposable cups and water maintained at 50°F to 60°F should be available. Under severe conditions, drink 1 to 2 cups every 20 minutes, for a total of 1 to 2 gallons per day. Do not use alcohol in place of water or other nonalcoholic fluids. Decrease your intake of coffee and caffeinated soft drinks during working hours.
- Acclimate yourself by slowly increasing workloads (e.g., do not begin with extremely demanding activities).
- Use cooling devices, such as cooling vests, to aid natural body ventilation. These devices add weight, so their use should be balanced against efficiency.
- Use mobile showers or hose-down facilities to reduce body temperature and cool protective clothing.
- Conduct field activities in the early morning or evening and rotate shifts of workers, if possible.
- Avoid direct sun whenever possible, which can decrease physical efficiency and increase the probability of heat stress. Take regular breaks in a cool, shaded area. Use a wide-brim hat or an umbrella when working under direct sun for extended periods.
- Provide adequate shelter/shade to protect personnel against radiant heat (sun, flames, hot metal).
- Maintain good hygiene standards by frequently changing clothing and showering.

- Observe one another for signs of heat stress. Persons who experience signs of heat syncope, heat rash, or heat cramps should consult the SC to avoid progression of heat-related illness.

Symptoms and treatment of heat stress are summarized in Table 2-1.

TABLE 2-1
Symptoms and Treatment of Heat Stress

Type of Heat Stress	Signs and Symptoms	Treatment
Heat Syncope	Sluggishness or fainting while standing erect or immobile in heat.	Remove to cooler area. Rest lying down. Increase fluid intake. Recovery usually is prompt and complete.
Heat Rash	Profuse tiny raised red blister-like vesicles on affected areas, along with prickling sensations during heat exposure.	Use mild drying lotions and powders, and keep skin clean for drying skin and preventing infection.
Heat Cramps	Painful spasms in muscles used during work (arms, legs, or abdomen); onset during or after work hours.	Remove to cooler area. Rest lying down. Increase fluid intake.
Heat Exhaustion	Fatigue, nausea, headache, giddiness; skin clammy and moist; complexion pale, muddy, or flushed; may faint on standing; rapid thready pulse and low blood pressure; oral temperature normal or low	Remove to cooler area. Rest lying down, with head in low position. Administer fluids by mouth. Seek medical attention.
Heat Stroke	Red, hot, dry skin; dizziness; confusion; rapid breathing and pulse; high oral temperature.	Cool rapidly by soaking in cool—but not cold—water. Call ambulance, and get medical attention immediately!

Monitoring Heat Stress

These procedures should be considered when the ambient air temperature exceeds 70°F, the relative humidity is high (>50 percent), or when workers exhibit symptoms of heat stress.

- The heart rate (HR) should be measured by the radial pulse for 30 seconds, as early as possible in the resting period.
- The HR at the beginning of the rest period should not exceed 100 beats/minute, or 20 beats/minute above resting pulse.
- If the HR is higher, the next work period should be shortened by 33 percent, while the length of the rest period stays the same.
- If the pulse rate still exceeds 100 beats/minute at the beginning of the next rest period, the work cycle should be further shortened by 33 percent.
- The procedure is continued until the rate is maintained below 100 beats/minute, or 20 beats/minute above resting pulse.

Refer to CH2M HILL HSE SOP-211, Heat and Cold Stress, for additional information.

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2.3.9 Compressed Gas Cylinders

Safety measures pertaining to handling compressed gas cylinders include:

- Valve caps must be in place when cylinders are transported, moved, or stored.
- Cylinder valves must be closed when cylinders are not being used and when cylinders are being moved.
- Cylinders must be secured in an upright position at all times.
- Cylinders must be shielded from welding and cutting operations and positioned to avoid being struck or knocked over; contacting electrical circuits; or exposed to extreme heat sources.
- Cylinders must be secured on a cradle, basket, or pallet when hoisted; they may not be hoisted by choker slings.

2.3.10 Procedures for Locating Buried Utilities

Local Utility Mark-Out Service: Contact MISS UTILITIES prior to conducting any subsurface work activities.

Name:	MISS UTILITIES
Phone:	800-257-7777

Procedures for locating buried utilities include:

- Contact your local utility location service.
- Where available, obtain utility diagrams for the facility.
- Review locations of sanitary and storm sewers, electrical conduits, water supply lines, natural gas lines, and fuel tanks and lines.
- Review proposed locations of intrusive work with facility personnel knowledgeable of locations of utilities. Check locations against information from utility mark-out service.
- Where necessary (e.g., uncertainty about utility locations), excavation or drilling of the upper depth interval should be performed manually.
- Monitor for signs of utilities during advancement of intrusive work (e.g., sudden change in advancement of auger or split spoon).
- When the client or other onsite party is responsible for determining the presence and locations of buried utilities, the SSC should confirm that arrangement.

2.3.11 Confined Space Entry

No confined space entry will be permitted. Confined space entry is not anticipated to occur during this project. However, if site conditions change the follow will apply. Confined

space entry requires additional health and safety procedures, training, and a permit. If conditions change such that confined-space entry is necessary, contact the HSM to develop the required entry permit.

When planned activities will not include confined-space entry, permit-required confined spaces accessible to CH2M HILL personnel are to be identified before the task begins. The SSC is to confirm that permit spaces are properly posted or that employees are informed of their locations and hazards.

Refer to CH2M HILL SOP HS-203, Confined Space Entry, for additional information.

2.3.12 Backing Field Vehicles

The following precautions shall be implemented to prevent incidents during backing of field vehicles:

- Avoid backing whenever possible. The SC will be responsible for determining when “backing” is allowed. If extensive backing is required, alarms that sense when an object is close by must be used.
- If backing is required, there MUST BE a spotter. If a spotter is not available, the driver MUST walk completely around the vehicle before backing up.
- When “backing” is likely to be a part of the activities, it must be discussed in the daily safety briefings to remind staff of the hazards and controls.
- Learn your vehicle’s blind spots.

2.3.13 Severe Weather

The following precautions should be taken in the event of severe weather:

- Identify "Take Shelter" areas before starting project. If it is necessary to seek shelter, notify the Project Manager and Client Representative.
- Work may proceed in light rain, although workers should wear rain gear.
- Exposure to slips, trips and falls is increased during rainy and snowing conditions.
- Take cover in field vehicle during adverse weather conditions (e.g., high winds, heavy rain, or lightning).
- Work shall cease and cover sought in the event of lightning or tornado warnings.
- In the event of excessive rainfall, excavations will be covered with an impervious liner and secured with either sandbags or stone.

2.3.14 Resident Protection

At a minimum the following shall apply:

- Work zones shall be clearly defined by orange construction fencing during remedial field activities – site residents will be requested to not enter work zones during active

remedial field activities. When residents are walking, standing or near work zones, the Safety Coordinator (SC) or designee, shall inform residents of potential site hazards and recommend they stand clear to minimize potential hazards associated with the on-going, nearby work activities.

- Water suppression will be used during excavation and soil removal activities to minimize dusty conditions.
- Dust monitoring will be performed daily during field activities to monitor the dust levels within the working areas. Action levels have been prescribed to provide for appropriate levels of protection for workers and residents. See section 5.0 for specific details regarding dust monitoring.
- Workers inside the work zones shall wear personal protective equipment as prescribed in Section 4.0. Safety to residents is of the utmost importance. Contact with contaminated materials presents the most significant exposure risks to residents. Decontamination materials will be available for residential use, as requested, if inadvertent contact is made with potentially contaminated materials, such as dust residue from sidewalks.

The SC shall continuously assess the working area to determine if additional safety measures are appropriate based upon actual site conditions.

2.4 Biological Hazards and Controls

2.4.1 Snakes

Each year, about 9,000 people are bitten by poisonous snakes in the U.S. Only about 15-25% actually receive venom, and U.S. deaths from snakebites only total about 12-15 people annually. In 2002, there were only 9 snakebite deaths in the US. Most snakebite deaths occur in small, young children whose lack of body mass and immune system development make them more susceptible to snake venom. However, a far larger number of people suffer medical complications ranging from mild to serious problems from improper treatment than the number who die. Therefore, knowing what to do to avoid snakebites, and how to properly treat them if they occur, is critical to preventing permanent injury or death.

Snakes typically are found in underbrush and tall grassy areas. If you encounter a snake, stay calm and look around; there may be other snakes. Turn around and walk away on the same path you used to approach the area. If a person is bitten by a snake, wash and immobilize the injured area, keeping it lower than the heart if possible. Seek medical attention immediately. **DO NOT** apply ice, cut the wound, or apply a tourniquet. Try to identify the type of snake: note color, size, patterns, and markings.

Table 2-3 summarizes the measures to be taken (and NOT to be taken) in the event of a snakebite.

TABLE 2-3
Snakebite Response Measures

Things to Do	Things NOT to Do
<ul style="list-style-type: none"> • Move victim, and everybody else, away from snakes. • Identify the snake - kill it ONLY if necessary. • Lie the victim down with the bite area at or just slightly below the heart level. • Calm the victim by explaining the facts about snakebites. • Immobilize the bite area with a splint and sling, if possible. • Remove constricting jewelry or clothing unless the victim resists. • Get professional medical help as quickly as possible. 	<ul style="list-style-type: none"> • Do not cut and suck the wound, either manually or orally. • Do not apply a tight, narrow band tourniquet - these cause amputations! • Do not apply ice or heat packs, and do not use a stun gun on the bite area. • Do not give the victim any food or drink, and this applies especially to alcohol! • Do not allow the victim to become alarmed, excited or agitated, as this will only increase blood flow and the chances of getting poison to the heart. • Do not allow victim to exercise vigorously, including running. • If you must kill the snake, then do NOT touch its head for at least one hour. If you must kill a snake for identification purposes, then completely remove its head and bury it. Snake heads have been documented as capable of biting and injecting poison an hour or more after decapitation. • Do not waste valuable time on unimportant acts like trying to find a snake to identify or kill it. Hemotoxic poison will start to enter the blood stream within 30 minutes, and neurotoxin poison works even faster.

Following the above protocols (Table 2-3) will greatly reduce the chances of serious complications from snakebites. Bear in mind that few people die from poisonous snakebites and the vast majority of snakebite victims are not even venomized. Snakes generally reserve their venom for prey they intend to eat. Snakebites are more a nuisance than a serious medical problem in most cases.

2.4.2 Poison Ivy and Poison Sumac

Poison ivy, poison oak, and poison sumac typically are found in brush or wooded areas. They are more commonly found in moist areas or along the edges of wooded areas. Become familiar with the identity of these plants. Wear protective clothing that covers exposed skin and clothes. Avoid contact with plants and the outside of protective clothing. If skin contacts a plant, wash the area with soap and water immediately. If the reaction is severe or worsens, seek medical attention. Additional information and photographs of each are provided in Attachment 10.

2.4.3 Ticks

Ticks typically are in wooded areas, bushes, tall grass, and brush. Ticks are black, black and red, or brown and can be up to one-quarter inch in size. Wear tightly woven light-colored clothing with long sleeves and pant legs tucked into boots; spray **only outside** of clothing with permethrin or permethrin and spray skin with only DEET; and check yourself frequently for ticks.

If bitten by a tick, grasp it at the point of attachment and carefully remove it. After removing the tick, wash your hands and disinfect and press the bite areas. Save the removed tick. Report the bite to human resources. Symptoms of tick-borne diseases include chills, fever, headache, fatigue, stiff neck, and bone pain. Other symptoms include:

- Lyme Disease - A rash might appear that looks like a bullseye with a small welt in the center.
- Rocky Mountain Spotted Fever - A rash of red spots may appear under the skin 3-10 days after the tick bite.

If any of these symptoms appear, seek medical attention.

2.4.4 Bees and Other Stinging Insects

Bee and other stinging insects may be encountered almost anywhere and may present a serious hazard, particularly to people who are allergic. Watch for and avoid nests. Keep exposed skin to a minimum. Carry a kit if you have had allergic reactions in the past, and inform the SSC and/or buddy. If a stinger is present, remove it carefully with tweezers. Wash and disinfect the wound, cover it, and apply ice. Watch for allergic reaction; seek medical attention if a reaction develops.

2.4.5 Bloodborne Pathogens

Exposure to bloodborne pathogens may occur when rendering first aid or cardiopulmonary resuscitation (CPR), or when coming into contact with landfill waste or waste streams containing potentially infectious material. Hepatitis B vaccination must be offered before the person participates in a task where exposure is a possibility.

Refer to CH2M HILL HSE SOP-202, Bloodborne Pathogens, for additional information regarding exposure controls and PPE.

2.4.6 Mosquito Bites

Due to the recent detection of the West Nile Virus in the Southeastern United States it is recommended that preventative measures be taken to reduce the probability of being bitten by mosquitoes whenever possible. Mosquitoes are believed to be the primary source for exposure to the West Nile Virus as well as several other types of encephalitis. The following guidelines should be followed to reduce the risk of these concerns for working in areas where mosquitoes are prevalent.

- Stay indoors at dawn, dusk, and in the early evening.

- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Spray clothing with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing.
- Apply insect repellent sparingly to exposed skin. An effective repellent will contain 35% DEET (N,N-diethyl-meta-toluamide). DEET in high concentrations (greater than 35%) provides no additional protection.
- Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands.
- Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's DIRECTIONS FOR USE, as printed on the product.

Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.

Symptoms of Exposure to the West Nile Virus

The West Nile Virus incubation period is from 3-15 days. Most infections are mild, and symptoms include fever, headache, and body aches, occasionally with skin rash and swollen lymph glands. More severe infection may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death.

If you have any questions or to report any suspicious symptoms, contact the project HSM.

2.4.7 Spiders

Black Widow

Description

The female black widow spider is almost twice the size of its male counterpart. Although both are considered venomous, only the female spider is able to bite and envenomate humans. During the summer months, the female black widow spider is the most venomous. The spider undergoes multiple moltings throughout the year and often changes color. The female is most often shiny black in color and has a rounded abdomen with a red distinctive hourglass on its ventral surface. Occasionally, two red spots may be seen instead of the hourglass configuration.

Symptoms

When bitten by a black widow spider, the symptoms usually begin with a pinprick sensation, followed by the appearance of mild swelling and redness around the bite wound. It is not unusual for the patient to be unaware of the bite until a local reaction has occurred. Close evaluation of the site may reveal two fang marks. The first hour after the bite, pain often increases around the area of the bite and spreads to the entire body. Upper extremity bites usually lead to spasm of the upper trunk muscles; bites of the lower extremity often lead to abdominal spasms.

Other common symptoms include an abnormal sensation in the extremities (i.e., prickling or burning), deep tendon reflexes, headache, anxiety, nausea, vomiting, tremor, restlessness, and seizures may also be seen. Symptoms usually resolve within 24-48 hours

General treatment includes local wound care, a tetanus shot, and pain medication if needed. Airway, breathing, and circulation should be monitored closely.

Prevention

Wear gloves, heavy garments that are fully buttoned, and protective footwear when working in areas where spiders commonly inhabit (i.e., dark and protected spaces such as wells, rock and wood piles, pipes, gloves, boots, etc.)

Brown Recluse

Description

The brown recluse spider is approximately 1 centimeters (cm) in body length, with a leg span of up to 2.5 cm. The color of these spiders is usually tan to brown.

Symptoms

Envenomation is initially painless for most victims. Within the first few hours, pain and redness occur at the site of the bite. The bite mark may resemble a bullseye and is most often 1-5 cm in diameter. Over the next few days, the bite area will ulcerate and spread in diameter and into the fatty tissue below. In one week after the bite a large area of skin and tissue can be involved. Surgical intervention is usually required to remove the bite area.

Systemic reactions, while uncommon, can occur in some individuals. These symptoms usually occur within 2 days of the bite and can include fever, chills, rash, nausea, vomiting, and possible renal failure.

General treatment includes local wound care, tetanus inoculation, immobilization, elevation, observation, and surgical removal of the wound.

Prevention

Wear gloves, heavy garments that are fully buttoned, and protective footwear when working in areas where spiders commonly inhabit (i.e., dark and protected spaces such as wells, rock and wood piles, pipes, gloves, boots, etc.)

Additional information regarding spiders can be found in Attachment 10.

2.5 Chemicals of Potential Concern

Table 2-4 summarizes information pertaining to chemicals of potential concern (COPCs) at the project site.

TABLE 2-4
Chemicals of Potential Concern Summary Table

Contaminant ^a	Impacted Media ^b	Maximum Conc(s) ^c	Exposure Limit ^d	IDLH ^e	Symptoms and Effects of Exposure	PIP ^f (eV)
Arsenic	SB	177 ppm	0.01 mg/m ³	5 mg/m ³	Ulceration of nasal septum, respiratory irritation, dermatitis, gastrointestinal disturbances, peripheral neuropathy, hyperpigmentation	N/A
Chromium As Cr II or Cr III	SB	51 ppm	0.5 mg/m ³	25 mg/m ³	Irritated eyes, sensitization dermatitis, histologic fibrosis of lungs	N/A
Vanadium	SB	37 ppm				
Lead	SB	820 ppm	0.05 mg/m ³	100 mg/m ³	Lassitude, facial pallor, weight loss, malnutrition, abdominal pain, constipation, anemia, gingival lead line, tremors, paralysis of wrist and ankles, encephalopathy, kidney disease, irritated eyes, hypertension	N/A

Notes:

^a "Ca" = potential occupational carcinogen.

^b Specify all impacted media to which site workers may be exposed using the following definitions:

A (Air)	SB (Soil)	SW (Surface Water)
D (Drums)	SL (Sludge)	TK (Tank)
GW (Groundwater)	SV (Soil Vapor)	

^c The maximum concentrations detected at the site for each media of concern.

^d The lower of the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) is listed. Values are given in parts per million (ppm) or milligrams per cubic meter (mg/m³).

^e IDLH = immediately dangerous to life and health (units are the same as specified "Exposure Limit" units for that contaminant); ND = Not determined.

^f PIP = photoionization potential; NA = Not applicable; UK = Unknown.

Workers may also be exposed to chemicals used during sampling and remediation activities. MSDSs are required for all virgin (i.e., non-contaminant) chemicals brought to the site. These MSDSs are presented as Attachment 8.

A summary of the personal protective equipment required to minimize exposure to environmental contaminants and virgin chemicals is presented in Section 4.

2.6 Potential Routes of Exposure

Potential routes of exposure include the following:

- **Dermal:** Skin contact with contaminated media. This route of exposure is minimized through proper use of PPE, as specified in Personal Protective Equipment Section of this plan.
- **Inhalation:** Inhalation of vapors and contaminated particulates. This route of exposure is minimized through proper respiratory protection and monitoring, as specified in the PPE and Air Monitoring/Sampling Sections of this plan, respectively.
- **Ingestion:** Inadvertent ingestion of contaminated media. This route should not present a concern if good hygiene practices are followed (e.g., wash hands and face before drinking or smoking).

3.0 Roles and Responsibilities

3.1 CH2M HILL Staff Responsibilities

3.1.1 Project Manager

The CH2M HILL project manager (PM) is responsible for providing adequate resources (budget and staff) for project-specific implementation of the HS&E management process. The PM has overall management responsibility for the tasks listed below. The PM may delegate specific tasks to other staff, as described in sections that follow, but retains ultimate responsibility for completion of the following in accordance with this HS&E Plan:

- Incorporate standard terms and conditions, and contract-specific HS&E roles and responsibilities in the contract with the client.
- Budget for the appropriate level of HS&E oversight during field activities. Contact the HSM for budget requirements and guidelines.
- Manage the site and interface with third parties in a manner consistent with our contract and subcontract agreements and the applicable standard of reasonable care.
- Ensure that the overall, project-specific HS&E goals are fully and continuously implemented.
- Ensure that CH2M HILL's SC is completing all duties outlined in this HS&E Plan.
- Promoting a safety culture with onsite CH2M HILL personnel and setting the example for safe behavior.

The PM has the following additional responsibilities when subcontractors are hired:

- Incorporate standard terms and conditions, and contract-specific HS&E roles and responsibilities in subcontract agreements (including flow-down requirements to lower-tier subcontractors).
- Select safe and competent subcontractors by implementing the CH2M HILL Subcontractor Management Program. This program includes the review of subcontractor pre-qualification questionnaires, training and medical monitoring records, and site-specific safety procedures prior to the start of subcontractor's field operations.
- Ensure that acceptable certificates of insurance, including CH2M HILL as named additional insured, are secured as a condition of subcontract award.
- Maintain copies of subcontracts and subcontractor certificates of insurance, bond, contractor's license, training and medical monitoring records, and project-specific HS&E procedures in the project file accessible to site personnel.

- Provide adequate oversight of subcontractor HS&E practices per the HS&E Plan.

3.1.2 Project Health and Safety Manager

The CH2M HILL Project Health and Safety manager (HSM) is responsible to:

- Support the SC's oversight of HS&E practices and interfaces with onsite third parties per the HS&E Plan.
- Conduct audits, as necessary, to assess site conditions and review HS&E program implementation.
- Assist the PM with HS&E budget guidelines.
- Assist with program implementation as needed.

The HSM has the following additional responsibilities when subcontractors are hired:

- Ensure that subcontractor pre-qualification questionnaires are reviewed and assist as applicable in the acceptance or rejection.
- Review and accept or reject subcontractor training records and site-specific safety procedures prior to start of subcontractor's field operations.
- Support the SC's oversight of subcontractor's (and lower-tier subcontractor's) HS&E practices per the HS&E Plan.

3.1.3 Safety Coordinator

The Safety Coordinator (SC) shall be onsite for the duration of onsite work and is responsible for verifying that the project is conducted in a safe manner including the following obligations:

- Verify that this HS&E Plan is current and amended when project activities or conditions change.
- Verify that CH2M HILL site personnel and subcontractors read this HS&E Plan and sign the CH2M HILL Employee Sign-Off Form included in Attachment 1.
- Verify compliance with the requirements of this HS&E Plan, applicable contractor health and safety plan(s) and any federal, state, and local regulations.
- Review and understand contractual obligations regarding HS&E roles and responsibilities.
- Manage the site and interfacing with third parties in a manner consistent with our contract/subcontract agreements and the applicable standard of reasonable care.
- Ensure that programs are effectively functioning to prevent and control hazards on the project.
- Verify that all CH2M HILL employees working in the field have the appropriate level of HS&E training, medical surveillance, and drug and alcohol testing for their job duties

including required specialty training (e.g., fall protection, confined space entry) identified in the Hazard Controls and Safe Work Practices Section of this HS&E Plan.

- Conduct an HS&E orientation for all CH2M HILL team members prior to entering the project work areas and deliver field HS&E training as needed based on project-specific hazards and activities.
- Maintain active and visible involvement using open communication with employees regarding safety issues on the project.
- Verify that safety meetings are conducted and document in the project file as needed throughout the course of the project (e.g., as tasks or hazards change).
- Attend Contractor safety meetings and ask questions about access to work areas, safety hazards, precautions and other general safety issues.
- Post required information onsite. An Occupational Safety and Health Administration (OSHA) job-site poster is required at sites where project field offices, trailers, or equipment-storage boxes are established. Contact the HSM for posters.
- Maintain HS&E records and documentation.
- Act as the project “Hazard Communication Coordinator” and perform the responsibilities outlined in the Hazard Communication section of this HS&E Plan.
- Act as the project “Emergency Response Coordinator” and perform the responsibilities outlined in the Emergency Preparedness section of this HS&E Plan.
- Verify that project HS&E forms, permits and self-assessment checklists are being used as outlined in this plan.
- Ensure that the Drug Testing Hospital Kit is available onsite in the event of a serious injury involving hospital, ambulance, or paramedic care. The hospital kit must accompany the injured employee to the hospital so they will get drug tested. For additional information on the Drug Testing Hospital Kits, refer to Attachment 11.
- Verify appropriate PPE use, availability, and training.
- Inform the HSM of any project incident, ensure that an Incident Report Form (IRF) is completed and conduct incident investigations as outlined in the Incident Reporting and Investigation section of this HS&E Plan.
- Facilitate OSHA or other government agency inspections including accompanying inspector and providing all necessary documentation and follow-up.
- Report all incidents to the HSM and/or the Honeywell HSPM immediately. Depending on the type and severity of incident, we may have to report it to Honeywell within hours of occurrence. The Honeywell HSPM will determine what needs to be reported, the timing of the reporting, and coordinate client notification so local and Corporate Honeywell personnel are appropriately notified.

The SC has the following additional responsibilities when subcontractors are hired:

- Verify that project files available to site personnel include copies of executed contracts and certificates of insurance; bond; contractors license; training, medical monitoring, and drug and alcohol testing records; and project-specific HS&E procedures prior to start of subcontractor's field operations.
- Verify that ongoing training, medical monitoring, and drug and alcohol testing requirements are being met (e.g., 8-hour refresher, random drug testing programs, etc).
- Perform oversight and/or assessments of subcontractor HS&E practices per this HS&E plan and verify that project activity self-assessment checklists have been completed (Attachment 5).

3.1.4 CH2M HILL Employees

All personnel are assigned responsibility for safe and healthy operations. This concept is the foundation for involving all employees in identifying hazards and providing solutions. For any operation, individuals have full authority to stop work and initiate immediate corrective action or control. In addition, each worker has a right and responsibility to report unsafe conditions/practices. This right represents a significant facet of worker empowerment and program ownership. Through shared values and a belief that all accidents are preventable, our employees accept personal responsibility for working safely. Each employee is responsible for the following:

- Perform work in a safe manner without injury, illness or property damage.
- Perform work in accordance with company policies, and report near misses, injuries, illnesses, and unsafe conditions.
- Report all incidents, include near misses, immediately to supervisor, and file proper forms with a human resources representative. Contact your HS&E Manager and the Honeywell HSPM to ensure client reporting procedures are met. It is important to do incident notification immediately because, depending on the type of incident, we may be required to report to Honeywell within hours of the event.
- Report all hazardous conditions and/or hazardous activities immediately to a supervisor for corrective action.
- Intervene when an unsafe behavior and/or condition is observed.
- Complete an HS&E orientation prior to being authorized to enter the project work areas.
- Inspect assigned PPE to ensure the absence of defects and proper function.

3.2 CH2M HILL Employee Medical Surveillance, Training, & Drug Testing

Employees assigned to this project will have the following minimum training.

- 40-hour hazardous waste operations training

- 3-day on-the-job experience
- 8-hour annual hazardous waste refresher training.
- Employees who are in an onsite supervisor role will complete 8 hours of hazardous waste supervisor training
- Drug-Free Workplace training (when drug testing is required)
- Honeywell Program orientation
- Site-specific training/orientation

Employees designated as SC will also have completed a 12-hour safety coordinator course. The safety coordinator training course meets the requirements of 29 CFR 1910.120 for on-site supervisor training. An SC must be present during all tasks performed in exclusion or decontamination zones.

The SC and additional designated employees, as necessary, will be certified in first aid and CPR by the American Red Cross, or equivalent. At least one first aid/CPR designated employee must be present during all tasks performed in exclusion or decontamination zones. Certain tasks (e.g., confined-space entry) and contaminants (e.g., lead) may require additional training. Additional training requirements are addressed in the specific hazard sections of this plan.

Employees who perform work activities in the decontamination or exclusion zone shall be enrolled in and have a current medical clearance as required by the medical surveillance program for hazardous waste workers.

Pregnant employees shall consult with the Corporate Consulting Physician prior to performing site activities and obtain a physician's statement of the employee's ability to perform hazardous activities before being assigned fieldwork.

Drug testing is required for CH2M HILL employees who engage in certain activities at Honeywell sites (e.g., activities involving heavy equipment or drill rigs). Employees who conduct fieldwork may be required to pass an initial 5-panel drug screen and an alcohol screen two weeks prior to starting field activities. These staff will also be required to enroll in a random testing program for the duration of their work on Honeywell, and will be subject to post-incident and "for cause" testing. Contact the HSM to determine if drug testing is required. If site conditions change and/or additional tasks are added, contact the HSM to determine drug and alcohol testing requirements.

Based on specific work activities/tasks, subcontractor personnel may be required to be drug and alcohol screened prior to conducting their field activities. Please contact the Health and Safety Program Manager (HSPM) for details and to determine if subcontractor personnel require drug testing.

Refer to CH2M HILL HSE SOP-113, Medical Surveillance, SOP-110, Training, and SOP-105, Drug-Free Workplace, for additional information.

3.3 CH2M HILL Subcontractors

The table(s) below lists the name of each subcontractor, the subcontractor safety representative, and a description of the subcontracted activities to be performed at the site.

Subcontractor	ATC
Subcontractor Safety Rep	
Subcontractor Onsite Tasks	Concrete removal, soil excavation and site restoration

- If additional subcontractors are added complete the following table.

Subcontractor	TBD
Subcontractor Safety Rep	
Subcontractor Onsite Tasks	

The subcontractors listed above are covered by this HS&E Plan and must be provided a copy of this document. However, this plan does not address hazards associated with the tasks and equipment for which the subcontractors have been engaged (e.g., drilling, excavation work, electrical). Subcontractors are responsible for the health and safety procedures specific to their work, and are required to submit these procedures to CH2M HILL for review before the start of field work. Subcontractors must comply with all established health and safety plan(s) for this project. The CH2M HILL SC should verify that subcontractor employee training, medical clearance, and fit test records are current and must monitor and enforce compliance with the established HS&E Plan(s). CH2M HILL's oversight does not relieve subcontractors of their responsibility for effective implementation and compliance with the established plan(s).

CH2M HILL team members should endeavor to observe subcontractors' safety performance. This endeavor should be reasonable, and include observation of hazards or unsafe practices that are both readily observable and occur in common work areas. CH2M HILL is not responsible for exhaustive observation for hazards and unsafe practices. The SC is responsible for confirming subcontractor performance against both the subcontractor's task specific safety procedures and applicable self-assessment checklists, as provided in Attachment 5.

HS&E related communications with CH2M HILL subcontractors should be conducted as follows:

- Brief subcontractors on the provisions of this plan, and require them to sign the CH2M HILL HS&E Plan Employee Sign-Off Form, included in Attachment 1.
- Request subcontractor(s) to brief project team on the hazards and precautions related to their work.

- When non-compliant or unsafe conditions or practices are observed, notify the subcontractor safety representative and require corrective action – the subcontractor is responsible for determining and implementing necessary controls and corrective actions.
- When repeat non-compliant or unsafe conditions are observed, notify the subcontractor safety representative and stop affected work until adequate corrective measures are implemented.
- When an apparent imminent danger exists, immediately remove all affected personnel, notify subcontractor safety representative, stop affected work until adequate corrective measures are implemented, and notify the Project Manager, HSM, and SC as appropriate.
- Document all verbal HS&E related communications in project field logbook, daily reports, or other records.

Subcontractors are responsible to:

- Comply with all local, state, and federal HS&E standards; and project/owner HS&E requirements.
- Provide a qualified subcontractor safety representative (SSR) to oversee the subcontractor activities and conduct safety inspections for their work.
- Conduct site-specific orientations for all subcontractor employees.
- Actively participate in the project HS&E program and attend all required safety meetings.
- Meet training, medical monitoring, and drug and alcohol testing requirements for their staff.
- Intervene when they observe unsafe behaviors and/or conditions.
- Maintain equipment and supplies necessary to complete activities in a safe manner.
- Notify the CH2M HILL SC of any injury or incident, including near-misses, immediately and submit reports to CH2M HILL within 24 hours. Additionally, all incidents must be reported to the HSM and Honeywell HSPM immediately so we can meet Honeywell's incident reporting requirements.

Refer to CH2M HILL HSE SOP-215, Contracts, Subcontracts, and HSE Management Practices, for additional information.

3.4 Third Parties

The table(s) below list the name of each third party, the third party safety representative, and a description of the third party activities being performed at the site which have the potential to impact CH2M HILL's activities.

Third Party	Maryland Department of the Environment
Third Party Safety Rep	Peggy Smith
Third Party Onsite Tasks	Inspection and oversight

This HS&E Plan does not cover parties who do not have a contractual relationship with CH2M HILL. CH2M HILL is not responsible for the health and safety or means and methods of a third party's work, and we must never assume such responsibility through our actions (e.g., advising on HS&E issues). In addition to this plan, CH2M HILL staff should review third parties' safety plans so that we remain aware of appropriate precautions that apply to us. Except in unusual situations when conducted by the HSM, CH2M HILL must never comment on or approve a third party's safety procedures. Self-assessment checklists, provided in Attachment 5, are to be used by the SC to review the third party's performance ONLY as it pertains to evaluating CH2M HILL employee and subcontractor exposure and safety.

HS&E related communications with third parties should be conducted as follows:

- Request the third party to brief CH2M HILL employees and subcontractors on the precautions related to the contractor's work.
- When an apparent third party's non-compliant or unsafe condition or practice poses a risk to CH2M HILL employees or subcontractors:
 - Notify the third party's safety representative
 - Request that the third party determine and implement corrective actions
 - If needed, stop affected CH2M HILL work until the third party corrects the condition or practice. Notify the client, Project Manager, and HSM as appropriate.
- If apparent third party's non-compliant or unsafe conditions or practices are observed, inform the third party's safety representative. CH2M HILL's obligation is limited strictly to informing the third party of the observation – the third party is solely responsible for determining and implementing necessary controls and corrective actions.
- If an apparent imminent danger is observed, immediately warn the third party's employee(s) in danger and notify the third party's safety representative. CH2M HILL's obligation is limited strictly to immediately warning the affected individual(s) and informing the third party of our observation – the third party is solely responsible for determining and implementing necessary controls and corrective actions.
- Document all verbal HS&E related communications in project field logbook, daily reports, or other records.

Refer to CH2M HILL HSE SOP-215, Contracts, Subcontracts, and HSE Management Practices, for additional information.

4.0 Personal Protective Equipment

The PPE hazard assessment performed by the HSM requires the following PPE for use during site activities. The PPE required by the table will be evaluated periodically by the SC to ensure the adequacy based on air monitoring results or changes to expected site conditions. The SC shall coordinate all changes with the HSM.

Refer to CH2M HILL HSE SOP-117, Personal Protective Equipment, and SOP-121, Respiratory Protection, for additional information.

4.1 PPE Specifications

PPE requirements for the project are summarized in Table 4-1.

TABLE 4-1
PPE Specifications ^a

Task	Level	Body	Head	Respirator ^b
All site tasks except those listed in Modified D	D	Work clothes; steel-toe, leather work boots; work glove.	Hardhat ^c Safety glasses Ear protection ^d Traffic Vest	None required
Contaminated soil excavation or exposure; confirmatory soil sampling;	Modified D	Coveralls: Uncoated coverall when working within exclusion zone Boots: Steel-toe work boots - outer boot covers when working within exclusion zones Gloves: Inner surgical-style nitrile & outer work leather gloves.	Hardhat ^c Splash shield ^c Traffic vest Safety glasses Ear protection ^d	None required
Contaminated soil excavation – not anticipated – contact HSM for additional requirements	C	Coveralls: Polycoated Tyvek® Boots: Steel-toe, chemical-resistant boots OR steel-toe, leather work boots with outer rubber boot covers Gloves: Inner surgical-style nitrile & outer chemical-resistant nitrile gloves.	Hardhat ^c Splash shield ^c Ear protection ^d Spectacle inserts	APR, full face, with P100/organic vapor combo cartridges.
Note anticipated or authorized	B	Coveralls: Polycoated Tyvek® Boots: Steel-toe, chemical-resistant boots OR steel-toe, leather work boots with outer rubber boot covers Gloves: Inner surgical-style nitrile & outer chemical-resistant nitrile gloves.	Hardhat ^c Splash shield ^c Ear protection ^d Spectacle inserts	Pressure demand supplied air respirator with escape bottle or Pressure demand SCBA

Notes:

^a CH2M HILL will provide PPE only to CH2M HILL employees.

^b No facial hair that would interfere with respirator fit is permitted.

^c Hardhat and splash-shield areas are to be determined by the SC.

^d Ear protection should be worn when conversations cannot be held at distances of 3 feet or less without shouting.

^e Cartridge change-out schedule will be established by the HSM and at a minimum shall be at least every 8 hours (or one work day), except if relative humidity is > 85%, or if organic vapor measurements are > midpoint of Level C range (refer to Section 5)-- then at least every 4 hours. If encountered conditions are different than those anticipated in this HS&E Plan, contact the HSM.

4.2 Reasons for Changing Level of Protection

Reasons for upgrading or downgrading the level of PPE are provided below.

4.2.1 Upgrade

Potential reasons for upgrading PPE level are listed below. *Note: Performing a task that requires an upgrade to a higher level of protection (e.g., Level D to Level C) is permitted only when the PPE requirements have been approved by the HSM, and an SC qualified at that level is present.*

- Request from individual performing tasks.
- Change in work tasks that will increase contact or potential contact with hazardous materials.
- Occurrence or likely occurrence of gas or vapor emission.
- Known or suspected presence of dermal hazards.
- Instrument action levels (Section 5) exceeded.

4.2.2 Downgrade

Potential reasons for downgrading PPE level are listed below.

- New information indicating that situation is less hazardous than originally thought.
- Change in site conditions that decrease the hazard.
- Change in work task that will reduce contact with hazardous materials.

5.0 Air Monitoring/Sampling

Air monitoring and sampling must be performed to verify that our employees are not be exposed to harmful levels of airborne contaminants and that airborne contaminants are not migrating into public areas. Refer to CH2M HILL SOP HSE-207, *Exposure Assessment for Airborne Chemical Hazards*, for additional information

5.1 Air Monitoring Specifications

Air monitoring specifications are summarized in Table 5-1.

Table 5-1					
Instrument	Tasks	Action Levels ^a		Frequency ^b	Calibration
Dust Monitor: Miniram model PDM-3 or equivalent	Excavation	0 -1 mg/m ³ > 1 mg/m ³	Level D Level C	Continuously throughout remedial excavation activities	Zero Daily
Noise-Level :	All	Conversations can be held at distances of 3 feet without shouting	No action required	Initially and periodically during task	NA
Auditory		Conversations cannot be held at a distances of 3 feet without shouting	Hearing protection required		

^a Action levels apply to sustained (3 minutes or longer) breathing-zone measurements above background.

^b The exact frequency of monitoring depends on field conditions and is to be determined by the SC; generally, every 5 to 15 minutes if acceptable; more frequently may be appropriate. Monitoring results should be recorded. Documentation should include instrument and calibration information, time, measurement results, personnel monitored, and place/location where measurement is taken (e.g., "Breathing Zone/MW-3," "at surface/SB-2," etc.).

^c Noise monitoring shall be used at the discretion of the SC.

5.2 Calibration

Instruments will be function tested in accordance with the respective manufacturer's instructions for proper instrument use and maintenance. The instrument vendor or the CH2M HILL warehouse staff will ensure equipment has been calibrated in accordance with manufacturer's specifications.

All direct reading instruments will be function tested daily by the SC using span gas, prior to performing work activities and after the completion of the daily activities.

5.3 Air Sampling

Personal air sampling will not be conducted during this project. However, if site conditions change and personal air sampling is required, the following shall apply. Sampling, in addition to real-time monitoring, may be required by other OSHA regulations where there may be exposure to certain contaminants. Air sampling typically is required when site contaminants include lead, cadmium, arsenic, asbestos, beryllium, hexavalent chromium, benzene, methylene chloride, vinyl chloride and certain volatile organic compounds. Air sampling methods will be National Institute for Occupational Safety and Health (NIOSH) or OSHA-certified and samples analyzed by a laboratory that is accredited by the American Industrial Hygiene Association (AIHA) for the compound specific method.

Real time dust monitoring will be performed using a MIE DataRAM 4000 dust monitors, or equivalent, throughout the duration of field activities. Each day, a DataRAM will be placed in a downwind and upwind location at the discretion of the SC. The CH2M HILL Safety Coordinator, or designee, will record the DataRAM periodically, along with a brief description of the activity taking place. Additionally, the DataRAM results will be downloaded each day so that the fluctuations in total dust concentrations can be observed

6.0 Decontamination

The SC must establish the specific decontamination procedures for the specific site tasks. The SC must monitor the decontamination procedures, and should modify any procedures found to be ineffective. The SC must ensure that procedures are established for disposing of materials generated on the site.

Refer to CH2M HILL HSE SOP-506, Decontamination, for additional information.

6.1 Decontamination Requirements

Possible decontamination procedures are provided in Section 6.1.

TABLE 6-1
Possible Decontamination Procedures

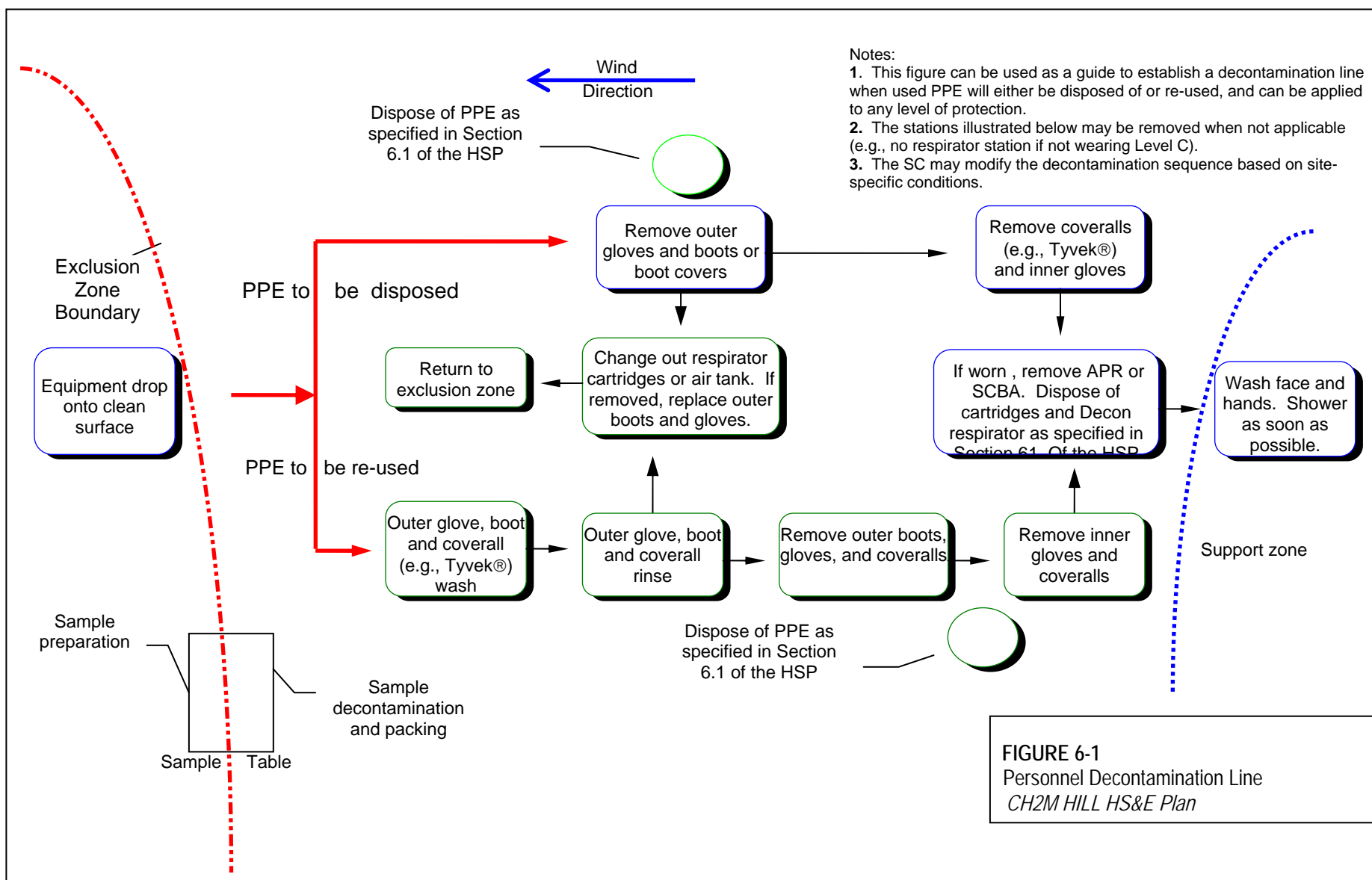
Personnel	Sample Equipment	Heavy Equipment
<ul style="list-style-type: none">• Boot wash/rinse• Glove wash/rinse• Outer-glove removal• Body-suit removal• Inner-glove removal• Respirator removal• Hand wash/rinse• Face wash/rinse• Shower• Disposal of PPE in municipal trash, or containment for disposal• Disposal of personnel rinse water to facility or sanitary sewer, or containment for offsite disposal	<ul style="list-style-type: none">• Wash/rinse equipment• Solvent-rinse equipment• Contain solvent waste for offsite disposal	<ul style="list-style-type: none">• Power wash• Steam clean• Dispose of equipment rinse water to facility or sanitary sewer, or contain for offsite disposal

6.2 Diagram of Personnel Decontamination Line

Figure 6-1 illustrates a conceptual establishment of work zones, including the decontamination line. Work zones are to be modified by the SC to accommodate task-specific requirements. No eating, drinking, or smoking is permitted in contaminated areas or in exclusion and decontamination zones. The SC should establish areas for these activities.

6.3 Collection and Disposal of Decontamination Wastes

Contaminated materials, PPE, and fluids shall be managed according to waste management procedures specified in the project Work Plan. If no such guidance is available, please contact the ECC for additional information and procedures.



7.0 Spill Containment and Notification

This section describes spill containment and notification requirements.

7.1 SPCC Regulated Facility

If the client facility is subject to a Spill Prevention, Control and Countermeasures (SPCC) Plan, a copy must be obtained and all spill prevention and response must conform to client SPCC requirements. If the client does not have an SPCC Plan and the project requires storage of more than 1,320 gallons of petroleum in 55-gallon containers or greater, a project-specific SPCC plan will be prepared.

7.2 Non-SPCC Regulated Facility

Projects not subject to SPCC requirements shall comply with this section. All onsite personnel shall be trained to follow the procedures described in this section.

7.2.1 Equipment

Field staff should obtain client approval for use of client-owned spill containment equipment. If client equipment is not available, the minimum spill equipment that shall be made available in the project's support zone is described in Table 7-1. Additional contaminant-specific spill response information may be included in the chemical MSDS.

TABLE 7-1
Minimum Spill Kit Equipment List

Spill Kit Contents
<ul style="list-style-type: none">• Absorbent material (kitty litter or vermiculite)• Neutralizers (for chemical spills)• Sodium Carbonate (acid spills)• Citric Acid (base spills)• Absorbent socks and pads• Safety Goggles• Protective Gloves• Tyvek Suit• Waste Containers and Labels

7.2.2 Emergency Spill Event

The release of an unknown hazardous material is considered an emergency spill event. Implement the following procedures during an emergency spill event:

1. Evacuate the area and go upwind
2. Warn others and direct them upwind
3. Immediately contact the onsite Safety Coordinator who will contact the HSM for direction

7.2.3 Non-Emergency Spill Event

A non-emergency spill event includes incidental releases that do not pose a significant safety or health hazard where chemical hazards are known and CH2M HILL personnel can safely implement the following procedures as a first responder:

1. Stop the source of the spill
2. Contain the spill material. If there is a chance the spill will reach nearby drains or waterways, block them off to keep the spill away
3. Contact the onsite Safety Coordinator

7.2.4 Cleanup

Clean up the spilled material wearing the proper PPE identified in the HS&E Plan equipment table if the spilled material is less than 5 gallons and hazards are known. Spills larger than 5 gallons must be cleaned up by a qualified subcontractor since CH2M HILL personnel are not trained to implement OSHA spill response requirements. Dispose of spill debris according to the Waste Management Plan or as directed by the ECC.

7.2.5 Notification and Reporting

All spills are considered an “incident” and shall be reported internally according to procedures in HSE SOP-111, Incident Reporting and Investigation. Since many spills may require agency reporting within 24 hours, it is very important that internal notification occur immediately. The following summarizes required actions:

1. **Immediately** notify the onsite Safety Coordinator
2. SC notifies the HSM
3. HSM notifies the PM, who notifies the client
4. HSM notifies the Legal Department of a serious incident
5. HSM, ECC, and client shall determine if the incident is reportable to an agency

8.0 Site-Control Procedures

The following site control procedures shall be implemented at the site:

- The SC will conduct a site safety briefing before starting field activities or as tasks and site conditions change.
- Topics for the site safety briefing include general discussion of the HS&E plan, site-specific hazards, locations of work zones, PPE requirements, equipment, special procedures, and emergencies.
- The SC will record attendance at safety briefings in a logbook and document the topics discussed.
- Establish support, decontamination, and exclusion zones. Delineate with flags or cones as appropriate. Support zone should be upwind of the site. Use access control at entry and exit from each work zone.
- Establish onsite communication consisting of the following:
 - Line-of-sight and hand signals
 - Air horn
 - Two-way radio or cellular telephone if available
- Establish offsite communication.
- Establish and maintain the “buddy system.”
- Initial air monitoring shall be conducted by the SC using an appropriate level of PPE.
- The SC is to conduct periodic inspections of work practices to determine the effectiveness of this plan. Deficiencies are to be noted, reported to the HSM, and corrected.

Refer to CH2M HILL HSE SOP-510, Site Control, for additional information.

9.0 Hazwoper Compliance Plan

Certain parts of the site work are covered by state or federal Hazwoper standards and therefore require training and medical monitoring. Anticipated Hazwoper tasks (Section 1.3.1) might occur consecutively or concurrently with respect to non-Hazwoper tasks. This section outlines procedures to be followed when approved activities specified in Section 1.3.2 do not require 24- or 40-hour training. Non-Hazwoper-trained personnel also must be trained in accordance with all other state and federal OSHA requirements.

- In many cases, air sampling, in addition to real-time monitoring, must confirm that there is no exposure to gases or vapors before non-Hazwoper-trained personnel are allowed on the site, or while non-Hazwoper-trained staff are working in proximity to Hazwoper activities. Other data (e.g., soil) also must document that there is no potential for exposure. The HSM must approve the interpretation of these data. Refer to subsections 2.5 and 5.3 for contaminant data and air sampling requirements, respectively.
- When non-Hazwoper-trained personnel are at risk of exposure, the SC must post the exclusion zone and inform non-Hazwoper-trained personnel of the:
 - Nature of the existing contamination and its locations
 - Limitations of their access
 - Emergency action plan for the site
- Periodic air monitoring with direct-reading instruments conducted during regulated tasks also should be used to ensure that non-Hazwoper-trained personnel (e.g., in an adjacent area) are not exposed to airborne contaminants.
- When exposure is possible, non-Hazwoper-trained personnel must be removed from the site until it can be demonstrated that there is no longer a potential for exposure to health and safety hazards.

Refer to CH2M HILL HSE SOP-220, Site-Specific Written Safety Plans, for additional information.

10.0 Incident Reporting and Investigation

This section describes the notification and investigation requirements pertaining to a site incident. Refer to CH2M HILL HSE SOP-111, Incident Reporting and Investigation, for additional information.

10.1 Definitions

10.1.1 Incident

An incident is an undesired event that results or could have resulted in an injury, illness, damage to assets or environment harm. The following events shall be considered incidents:

- Injury or illness to a CH2M HILL employee or CH2M HILL subcontractor employee
- Injury or illness to a third party that was caused by a CH2M HILL activity
- Hazardous substance exposure
- Damage to property or equipment
- Motor vehicle accident
- Fire or explosion
- Spill or release
- Environmental issue permit violation
- A “near-miss”

10.1.2 Near-Miss

A near-miss occurs when an intervening factor prevented an injury, damage to property, or environmental harm from occurring. Examples of near-miss situations include: a hard hat or other PPE prevented an injury; secondary containment or emergency shutoff prevented a spill; or an alert co-worker prevented an accident. All near miss incidents and reports must be reported and sent to the HSM as soon as practical, depending on the situation.

10.1.3 Serious Incidents

The HSM and Legal and Insurance Department (LID) shall determine if an event should be considered as a serious incident after reviewing the initial incident facts. The general criteria for serious incidents include:

- Intervention by external emergency response organizations
- Hospitalization
- Spills and releases of hazardous substances exceeding the reportable quantity (RQ)
- Potential violations of law or regulation
- Estimated property damage in excess of \$10,000

10.2 Incident Notification and Communication

Injury Reporting

- If a CH2M HILL employee is injured immediately notify their group leader.
- Call the CH2M HILL Occupational Health Nurse

1-800-756-1130

- In case of emergency call 911.

Incident Notification and Reporting

- Upon any other project incident (fire, spill, near miss, death, etc.), immediately notify the PM and HSM. Call emergency beeper number if HSM is unavailable.
- Notify and submit reports to client as required in contract.
- Serious Incidents must be reported in accordance with CH2M HILL Standard of Practice, *Serious Incident Reporting Process*, immediately. Serious incidents are those that involve any of the following:
 - Work related death, or life threatening injury or illness of a CH2M HILL employee, subcontractor, or member of the public
 - Kidnap/missing person
 - Acts or threats of terrorism
 - Event that involves a fire, explosion, or property damage that requires a site evacuation or is estimated to result in greater than \$ 500,000 in damage.

Spill or release of hazardous materials or substances that involves a significant threat of imminent harm to site workers, neighboring facilities, the community or the environment

All CH2M HILL and subcontractors' employees shall immediately report any incident in which they are involved to their direct supervisor, and the supervisor shall inform the CH2M HILL SC. The SC shall then contact the PM, HSM, and the Honeywell HSPM immediately. Immediate reporting is critical because there are certain types of incidents that must be reported to Honeywell within hours of occurrence. The Honeywell HSPM will help the team determine what needs to be reported to Honeywell, how quickly it needs to be reported to Honeywell, and who at Honeywell (local, corporate, etc) needs to be notified.

Incident communications regarding serious incidents (regardless of the party involved) shall be considered sensitive in nature and must be controlled in a confidential manner. Internal communications regarding a serious incident may be conducted with affected project, regional, and Business Group staff but must be kept to a minimum. Communication should be oral whenever possible. If e-mail communications are necessary they shall be sent as confidential emails following the procedure provided in section 6.2.2 of CH2M HILL HSE SOP-111, Incident Reporting and Investigation. A LID representative shall direct all internal and external communications, including internal incident reporting, agency reporting, client notification, and incident investigations.

The PM or the HSPM will be responsible to ensure that the incident is entered into Honeywell's event tracking system and an IRF is completed within 24 hours of any incident. The HSPM can assist with complying with entering information into Honeywell's event tracking system. CH2M HILL's requirements can be met by entering an electronic IRF directly into the IRF database. The electronic IRF is found on the CH2M HILL HS&E web page under Tools and Forms>Electronic Tools and Forms. If unable to submit an IRF electronically, the SC shall complete the hardcopy IRF provided in Attachment 12 and fax

the IRF to the human resources representative (for CH2M HILL employee injuries), the PM, or the HSM (for all other incidents) for database entry. A copy of the hard-copy form should also be sent to the Honeywell HSPM. **An IRF for a serious incident shall not be initiated until directed by a representative of the LID.**

When additional or updated information becomes available that was not included in the original IRF the PM shall forward such information to the human resources representative (for CH2M HILL employee injuries) or the HSM (for all other incidents) so that the IRF may be updated. Updates to IRF reports should also be sent to the Honeywell HSPM.

CH2M HILL staff shall comply with all applicable statutory incident reporting requirements such as those required by Federal agencies (EPA, OSHA, etc) and local authorities (police).

10.3 Incident Investigation

Incident investigations are to be initiated and completed as soon as possible, but no later than 72 hours after the incident has occurred. The level and type of investigation will be determined by Honeywell and/or the Honeywell HSPM. **All serious incidents shall be investigated as directed by a representative of the LID.** The HSM/ECC may conduct the investigation directly or may delegate this function to the SC or other party, depending on the extent of the incident and staff availability.

The Incident Investigation Guideline provided in Attachment 12 shall be followed when documenting an investigation. Typically, minor incident investigations will be completed by the HSM/ECC by including the investigation facts in the IRF. The HSM/ECC may require completion of a separate investigation report or the Root Cause Analysis Form for more extensive investigations. The HSM/ECC shall ensure that the PM and SC are made aware of investigation findings and all corrective actions, and shall verify that corrective actions are implemented to prevent further incidents.

10.4 Corrective Actions

All corrective actions recommended from the incident investigation report shall be taken to prevent recurrence of the incident. The PM or SC should hold a review meeting to discuss the incident and the corrective actions. The responsible supervisors shall be assigned to carry out the corrective actions and shall inform the SC upon successful implementation of all corrective actions.

11.0 Emergency Preparedness

An emergency may be an injury to a worker, an explosion, evacuation, fire, or chemical release. Employees must know what to do if an emergency occurs. This requires pre-planning and communication of these plans to employees.

Refer to CH2M HILL HSE SOP-106, Emergency Planning, for additional information.

11.1 Pre-Emergency Planning

The SC shall perform the following pre-emergency planning tasks before starting field activities and coordinate emergency response with CH2M HILL onsite parties, the facility, and local emergency-service providers as appropriate.

- Coordinate with property owner and/or review the facility emergency and contingency plans where applicable. Have a copy readily available at the site for review and attach a copy to this HS&E Plan.
- Complete and post the Emergency Contacts form provided in the front matter of this document. The SC should confirm that all information provided on the Emergency Contacts form is accurate and appropriately updated.
- Confirm and post evacuation routes, assembly areas and route to hospital.
- Determine what onsite communication equipment is available (e.g., two-way radio, air horn)
- Determine what offsite communication equipment is needed (e.g., nearest telephone, cell phone)
- Communicate emergency procedures to all field staff prior to field activities.
- Post “Exit” signs above exit doors and post “Fire Extinguisher” signs above locations of extinguishers in field trailers.
- Keep areas near exits and extinguishers free of obstructions.
- Designate one vehicle as the emergency vehicle, place hospital directions and map inside, and keep keys in ignition during field activities
- Where appropriate and acceptable to the client, inform emergency room and external emergency response organizations of anticipated types of site emergencies.
- Rehearse the emergency response plan before site activities begin, including driving the route to the hospital.
- Emergency drills should be performed periodically, but at least once per year. Upon completion of each drill, the SC shall evaluate the effectiveness of the emergency plan.

Any problems or concerns identified during the evaluation must be corrected immediately.

11.2 Emergency Equipment and Supplies

The SC shall verify that appropriate emergency equipment and supplies are available, as needed, and in proper working order and mark the locations of the equipment on the site map when a map is provided. The following equipment and supplies are typically required:

- Fire Extinguishers
- First aid kit
- Bloodborne pathogen kit
- Personal eye wash station
- Potable water

11.3 Incident Response

The following actions shall be taken in the event of a fire, explosion, or chemical release:

- Shut down CH2M HILL operations and evacuate the immediate area
- Notify appropriate response personnel
- Account for personnel at the designated assembly area(s)
- Assess the need for site evacuation, and evacuate the site as warranted

11.4 Evacuation Procedures

Typical evacuation procedures include the following:

- Evacuation routes and assembly areas will be designated by the SC before work begins
- Personnel will assemble at the assembly area(s) upon hearing the emergency signal for evacuation
- The SC and a “buddy” will remain on the site after the site has been evacuated (if safe) to inform local responders of the nature and location of the incident
- The SC will account for all personnel at the assembly area
- The SC will write up a report as soon as possible after the emergency the following the guidelines provided in the Incident Report Section of the HS&E Plan.

11.5 Emergency Medical Treatment

The following actions shall be taken in the event of a medical emergency:

- Get medical attention immediately.
- Notify appropriate emergency response authorities listed on the Emergency Contacts form, as necessary.
- Prevent further injury.
- Initiate first aid and CPR where feasible.
- Make certain that the injured person is accompanied to the emergency room.

The SC will assume control during a medical emergency until the ambulance arrives or until the injured person is admitted to the emergency room. If the injured is a CH2M HILL employee, the SC or PM must accompany the injured CH2M HILL employee to the emergency room and to any follow-up appointments until the injured is released to full duty.

If there is doubt about whether medical treatment is necessary, or if the injured person is reluctant to accept medical treatment, contact the CH2M HILL medical consultant. When contacting the medical consultant, state that the situation is a CH2M HILL matter, and give your name and telephone number, the name of the injured person, the extent of the injury or exposure, and the name and location of the medical facility where the injured person was taken.

The SC shall ensure that all injuries are reported according to the guidelines in the Incident Reporting and Investigation Section of this HS&E Plan.

12.0 Recordkeeping

The following records (see Table 12-1) shall be maintained as indicated. Refer to CH2M HILL SOP HSE-15 for complete recordkeeping requirements and additional information.

TABLE 12-1
Recordkeeping Requirements

Record	Location	Duration
Medical and Exposure Records	Medical & Training Administrator	Employment + 30 years
HS&E Plans	Project File; MTA	Project duration + 5 years
HS&E Training Records	Project File; HandS Database	Employment + 30 years
Environmental Documentation (permits, approvals, manifests)	Project File; HS&E Archive	Project duration + 5 years

Attachment 1

Employee Signoff Form

EMPLOYEE SIGNOFF FORM**Health, Safety and Environment Plan**

The CH2M HILL project employees and subcontractors listed below have been provided with a copy of this HS&E Plan, have read and understood it, and agree to abide by its provisions.

Project Name: McComas Street, Residential Remedial
Action – Baltimore, Maryland

Project Number: 365288.RS.20.22.MS

EMPLOYEE NAME (Please print)	EMPLOYEE SIGNATURE	COMPANY	DATE

Attachment 2

Job Hazard Analysis

Activity:	Date:
	Project:
Description of the work:	Site Supervisor:
	Site Safety Officer:
	Review for latest use: Before the job is performed.

Work Activity Sequence (Identify the principal steps involved and the sequence of work activities)	Potential Health and Safety Hazards (Analyze each principal step for potential hazards)	Hazard Controls (Develop specific controls for each potential hazard)

Equipment to be used (List equipment to be used in the work activity)	Inspection Requirements (List inspection requirements for the work activity)	Training Requirements (List training requirements including hazard communication)

PRINT NAME

SIGNATURE

Supervisor Name: _____

Date/Time: _____

Safety Officer Name: _____

Date/Time: _____

Employee Name(s): _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

JOB/TASK NAME: Confirmatory soil sampling – oversight of remedial action excavation-loading - IDW Management		DATE: 08-08	NEW ____ REVISED ____	PAGE ____ OF ____
ASSOCIATE(S)/JOB TITLE PERFORMING THE JOB/TASK:		SUPERVISOR(S): Joe Murphy		ANALYSIS PERFORMED BY:
PROJECT NAME AND JOB/TASK LOCATION: Honeywell – McComas Street – Residential Remedial Action –		DEPARTMENT(S):		REVIEWED BY: Bill Berlett
PERSONAL PROTECTIVE EQUIPMENT:		SHIFT (if applicable):		APPROVED BY: Bill Berlett
<u>JOB STEPS</u>		<u>POSSIBLE HAZARDS</u>	<u>PROCEDURE/ACTION TO CONTROL OR ELIMINATE</u>	
1.	Mobilization and travel between residential properties	Vehicle Operation 1) Opening/closing doors, windows and trunk 2) Loading objects 3) Driving 4) Parking 5) Distractions 6) Emergency preparedness	1) Keep fingers and hands free from pinch points 2) Use a golfer lift (raise one leg) while removing items from trunk. 3) Follow the Smith System's "5 keys of Safe Driving". a) Aim high in steering b) Get the Big picture c) Keep your eyes moving d) Leave yourself an out e) Make sure others see you 4) Park in a manner that will allow for safe exit from vehicle, and where practicable, park vehicle so that it can serve as a barrier 5) <u>Do not</u> do the following while driving: a) Talk on a mobile phone b) Eat or drink c) Take your eyes off of the road to adjust radio 6) Wear seat belt, maintain a first aid kit, and inform others of travel plans.	
		Traffic 1) Struck by	1) The following precautions must be taken when working around traffic: a) Exercise caution when exiting traveled way or parking along street – avoid sudden stops, use flashers, etc. b) Park in a manner that will allow for safe exit from vehicle, and where practicable, park vehicle so that it can serve as a barrier. c) Wear reflective/high-visibility safety vests. d) Eye protection should be worn to protect from flying debris. e) Remain aware of factors that influence traffic related hazards and required controls – sun glare, rain, wind, flash flooding, limited sight-distance, hills, curves, guardrails, width of	

			shoulder, etc. f) Always remain aware of an escape route -- behind an established barrier, parked vehicle, guardrail, etc. g) Always pay attention to moving traffic – never assume drivers are looking out for you
2.	Sampling and IDW Management	Slip/ Trip/ Fall 1) Walking 2) Sampling	1) Precautions to take while sampling excavations – depths of excavation will be no greater than 3 feet below ground surface: a) Maintain housekeeping (i.e. hoses, debris, standing water, etc.) i. Store sampling equipment out of the way when it is not in use ii. Be aware of placement of tools, hoses from equipment and other equipment iii. Clean up any spills before continuing work
		Chemical Exposure 1) Field instrument calibration chemicals, sample preservative chemicals, decontamination solutions, untreated groundwater, equipment gasoline and oil	1) Review the "Site Specific Health and Safety Plan". a) Contaminants of Concern Table b) Refer to Personal Protective Equipment Schedule c) Refer to air monitoring d) Personal hygiene i. No eating, drink or smoking. ii. Wash hands and face after performing task 2) To prevent exposure from chemicals: a) Review Material Safety Data Sheet (MSDS). b) Utilize Personal Protective Equipment identified in this Health and Safety Plan c) Label all bottles and containers d) Store chemicals in properly labeled containers
3.	Material Handling and IDW Management	Lifting Objects (sample coolers, compressors) 1) Back Strain 2) Crushed appendages, scrapes, abrasions and cuts	1) Utilize a material handling device or a buddy to lift any object >25 pounds. For all other manual lifting, follow these recommendations: a) Stand with your feet at least shoulder distance apart. b) Position your feet to face the direction of travel. c) Slightly bend your knees. d) Start to squat, bending your hips and knees, not your waist. e) Keep load close to body and raise yourself using your leg and hip muscles.

			<p>f) Tighten your stomach muscles as you lift.</p> <p>g) Avoid twisting movements.</p> <p>2) Prevent crush hazards by:</p> <p>a) Not positioning fingers or toes under object</p> <p>b) Wearing steel toed or safety toed boots</p> <p>3) Prevent abrasions, scrapes and cuts by:</p> <p>a) Being aware of sharp edges and other parts of stainless steel wells</p> <p>b) If sample containers break, clean up broken glass and dispose of in a puncture proof container.</p> <p>c) Decontamination procedures must also be followed if the broken container contained chemical preservative or untreated groundwater.</p>
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PRINT NAME

SIGNATURE

Supervisor Name: _____

Date/Time: _____

Safety Officer Name: _____

Date/Time: _____

Employee Name(s): _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Date/Time: _____

Attachment 3
Daily Tailgate Safety Briefing Form

CH2M HILL Daily Tailgate Safety Briefing Form		
Project Name: McComas Street – Residential Remedial Action – Private Residences		Project Number:365288.RS.20.22.MS
Date:	Start Time:	Completed Time:
Site Location:		
Type of Work (general):		
Safety Issues		
Tasks (this shift):		
PPE Requirements:		
Chemical Hazards:		
Air Monitoring Requirements:		
Physical Hazards:		
Control Measures:		
Hazard Communication Overview (MSDSs):		
Special Topics (i.e., incidents, near misses, etc.)		
Daily Checklist		
HSE Plan up to date and present onsite?	Yes	No
Air monitoring equipment present, working, and calibrated?	Yes	No
Personnel training current?	Yes	No
Hospital Route Map and Emergency Phone Numbers posted onsite?	Yes	No
PPE present and worn by personnel?	Yes	No
Comments:		
Attendees		
Print Name	Sign Name	
Meeting conducted by:		

Attachment 4

Pre-Task Safety Plan

CH2MHILL

Pre-Task Safety Plan (PTSP)

Project: _____ Location: _____ Date: _____		
Supervisor: _____ Job Activity: _____ _____		
Task Personnel: _____ _____ _____ _____		
List Tasks: _____ _____ _____ _____		
Tools/Equipment Required for Tasks (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools): _____ _____ _____		
Potential H&S Hazards, including chemical, physical, safety, biological and environmental (check all that apply):		
<input type="checkbox"/> Chemical burns/contact	<input type="checkbox"/> Trench, excavations, cave-ins	<input type="checkbox"/> Ergonomics
<input type="checkbox"/> Pressurized lines/equipment	<input type="checkbox"/> Overexertion	<input type="checkbox"/> Chemical splash
<input type="checkbox"/> Thermal burns	<input type="checkbox"/> Pinch points	<input type="checkbox"/> Poisonous plants/insects
<input type="checkbox"/> Electrical	<input type="checkbox"/> Cuts/abrasions	<input type="checkbox"/> Eye hazards/flying projectile
<input type="checkbox"/> Weather conditions	<input type="checkbox"/> Spills	<input type="checkbox"/> Inhalation hazard
<input type="checkbox"/> Heights/fall > 6 feet	<input type="checkbox"/> Overhead Electrical hazards	<input type="checkbox"/> Heat/cold stress
<input type="checkbox"/> Noise	<input type="checkbox"/> Elevated loads	<input type="checkbox"/> Water/drowning hazard
<input type="checkbox"/> Explosion/fire	<input type="checkbox"/> Slips, trip and falls	<input type="checkbox"/> Heavy equipment
<input type="checkbox"/> Radiation	<input type="checkbox"/> Manual lifting	<input type="checkbox"/> Aerial lifts/platforms
<input type="checkbox"/> Confined space entry	<input type="checkbox"/> Welding/cutting	<input type="checkbox"/> Demolition
Other Potential Hazards (Describe): _____ _____ _____ _____		

Hazard Control Measures (Check All That Apply):

PPE <input type="checkbox"/> Thermal/lined <input type="checkbox"/> Eye <input type="checkbox"/> Dermal/hand <input type="checkbox"/> Hearing <input type="checkbox"/> Respiratory <input type="checkbox"/> Reflective vests <input type="checkbox"/> Flotation device	Protective Systems <input type="checkbox"/> Sloping <input type="checkbox"/> Shoring <input type="checkbox"/> Trench box <input type="checkbox"/> Barricades <input type="checkbox"/> Competent person <input type="checkbox"/> Locate buried utilities <input type="checkbox"/> Daily inspections	Fire Protection <input type="checkbox"/> Fire extinguishers <input type="checkbox"/> Fire watch <input type="checkbox"/> Non-spark tools <input type="checkbox"/> Grounding/bonding <input type="checkbox"/> Intrinsically safe equipment	Electrical <input type="checkbox"/> Lockout/tagout <input type="checkbox"/> Grounded <input type="checkbox"/> Panels covered <input type="checkbox"/> GFCI/extension cords <input type="checkbox"/> Power tools/cord inspected
Fall Protection <input type="checkbox"/> Harness/lanyards <input type="checkbox"/> Adequate anchorage <input type="checkbox"/> Guardrail system <input type="checkbox"/> Covered opening <input type="checkbox"/> Fixed barricades <input type="checkbox"/> Warning system	Air Monitoring <input type="checkbox"/> PID/FID <input type="checkbox"/> Detector tubes <input type="checkbox"/> Radiation <input type="checkbox"/> Personnel sampling <input type="checkbox"/> LEL/O2 <input type="checkbox"/> Other	Proper Equipment <input type="checkbox"/> Aerial lift/ladders/scaffolds <input type="checkbox"/> Forklift/heavy equipment <input type="checkbox"/> Backup alarms <input type="checkbox"/> Hand/power tools <input type="checkbox"/> Crane with current inspection <input type="checkbox"/> Proper rigging <input type="checkbox"/> Operator qualified	Welding & Cutting <input type="checkbox"/> Cylinders secured/capped <input type="checkbox"/> Cylinders separated/upright <input type="checkbox"/> Flash-back arrestors <input type="checkbox"/> No cylinders in CSE <input type="checkbox"/> Flame retardant clothing <input type="checkbox"/> Appropriate goggles
Confined Space Entry <input type="checkbox"/> Isolation <input type="checkbox"/> Air monitoring <input type="checkbox"/> Trained personnel <input type="checkbox"/> Permit completed <input type="checkbox"/> Rescue	Medical/ER <input type="checkbox"/> First-aid kit <input type="checkbox"/> Eye wash <input type="checkbox"/> FA-CPR trained personnel <input type="checkbox"/> Route to hospital	Heat/Cold Stress <input type="checkbox"/> Work/rest regime <input type="checkbox"/> Rest area <input type="checkbox"/> Liquids available <input type="checkbox"/> Monitoring <input type="checkbox"/> Training	Vehicle/Traffic <input type="checkbox"/> Traffic control <input type="checkbox"/> Barricades <input type="checkbox"/> Flags <input type="checkbox"/> Signs
Permits <input type="checkbox"/> Hot work <input type="checkbox"/> Confined space <input type="checkbox"/> Lockout/tagout <input type="checkbox"/> Excavation <input type="checkbox"/> Demolition <input type="checkbox"/> Energized work	Demolition <input type="checkbox"/> Pre-demolition survey <input type="checkbox"/> Structure condition <input type="checkbox"/> Isolate area/utilities <input type="checkbox"/> Competent person <input type="checkbox"/> Hazmat present	Inspections: <input type="checkbox"/> Ladders/aerial lifts <input type="checkbox"/> Lanyards/harness <input type="checkbox"/> Scaffolds <input type="checkbox"/> Heavy equipment <input type="checkbox"/> Cranes and rigging	Training: <input type="checkbox"/> Hazwaste <input type="checkbox"/> Construction <input type="checkbox"/> Competent person <input type="checkbox"/> Task-specific (THA) <input type="checkbox"/> Hazcom

Field Notes: _____

Name (Print): _____

Signature: _____

Date: _____

Attachment 5

Project Activity Self-Assessment Checklists

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project's HSP/FSI.

This checklist is to be used at locations where: (1) CH2M HILL employees enter excavations (complete Sections 1 and 3), and/or (2) CH2M HILL oversight of an excavation subcontractor is required (complete entire checklist).

SC may consult with excavation subcontractors when completing this checklist, but shall not direct the means and methods of excavation operations nor direct the details of corrective actions. Excavation subcontractors shall determine how to correct deficiencies and we must carefully rely on their expertise. Conditions considered imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazardous area until corrected.

Project Name: _____ Project No.: _____

Location: _____ PM: _____

Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

- ☐ Evaluate CH2M HILL employee exposures to excavation hazards
☐ Evaluate a CH2M HILL subcontractor's compliance with excavation HS&E requirements

Subcontractor Name: _____

- Check "Yes" if an assessment item is complete/correct.
- Check "No" if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the excavation subcontractor. Section 3 must be completed for all items checked "No."
- Check "N/A" if an item is not applicable.
- Check "N/O" if an item is applicable but was not observed during the assessment.

Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HSE-32.

SECTION 1**Yes No N/A N/O****EXCAVATION ENTRY REQUIREMENTS (4.1)**

1. Personnel have completed excavation safety training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Competent person has completed daily inspection and has authorized entry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Personnel are aware of entry requirements established by competent person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Protective systems are free from damage and in stable condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Surface objects/structures secured from falling into excavation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Potential hazardous atmospheres have been tested and found to be at safe levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Precautions have been taken to prevent cave-in from water accumulation in the excavation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Personnel wearing appropriate PPE, per HSP/FSI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>SECTION 2</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>N/O</u>
GENERAL (4.2.1)					
9. Daily safety briefing/meeting conducted with personnel		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Excavation and protective systems adequately inspected by competent person		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Defective protective systems or other unsafe conditions corrected before entry		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Guardrails provided on walkways over excavation 6' (1.8m) or deeper		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Barriers provided at excavations 6' or deeper when excavation not readily visible		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Barriers or covers provided for wells, pits, shafts, or similar excavation 6' (1.8 m) or deeper		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Earthmoving equipment operated safely (use earthmoving equipment checklist in HS-27)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRIOR TO EXCAVATING (4.2.2)					
16. Dig permit obtained where required by client/facility		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Location of underground utilities and installations identified		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Excavation area evaluated for OE/UXO hazards		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Soils characterized prior to excavation where contamination may be present		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. USDA (or local equivalent) soil permit obtained for soil transport, where required		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Excavation area checked for wetlands, endangered species, cultural/historic resources		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. ACOE/CWA 404 (or local equivalent) permit obtained for wetlands, where required		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Stockpile management plan prepared		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Waste discharge/NPDES (or local equivalent) permit obtained for excavation dewatering		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Stormwater pollution prevention or erosion & sediment control plan prepared, where required)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCAVATING ACTIVITIES (4.2.3)					
26. Rocks, trees, and other unstable surface objects removed or supported		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Exposed underground utility lines supported		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Undermined surface structures supported or determined to be in safe condition		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Warning system used to remind equipment operators of excavation edge		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Stockpile, excavation covers, liners, silt fences in place, where required		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Fugitive dust suppressed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCAVATION ENTRY (4.2.4)					
32. Trenches > 4' (1.2 m) deep provided with safe means of egress within 25' (7.6 m)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Structure ramps designed and approved by competent person		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Potential hazardous atmospheres tested prior to entry		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Rescue equipment provided where potential for hazardous atmospheres exists		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Ventilation used to control hazardous atmospheres and air tested frequently		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Appropriate respiratory protection used when ventilation does not control hazards		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Precautions taken to prevent cave-in from water accumulation in excavation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Precautions taken to prevent surface water from entering excavation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Protection provided from falling/rolling material from excavation face		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Spoil piles, equipment, materials restrained or kept at least 2' (61 cm) from excavation edge		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCAVATION PROTECTIVE SYSTEMS (4.2.5)					
42. Protective systems used for excavations 5' (1.5 m) or deeper, unless stable rock		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Protective systems for excavation deeper than 20' (6.1 m) designed by registered PE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. If soil unclassified, maximum allowable slope is 34 degrees		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Protective systems free from damage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Protective system used according to manufacturer's recommendations and not subjected to Loads exceeding design limits		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Protective system components securely connected to prevent movement or failure		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Cave-in protection provided while entering/exiting shielding systems		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Personnel removed from shielding systems when installed, removed, or vertical movement		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Auditor: _____ Project Manager: _____

H&S Self-Assessment Checklist – TRAFFIC CONTROL

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project's HSP/FSI.

This checklist is to be used at locations where: 1) CH2M HILL employees are exposed to traffic hazards and/or 2) CH2M HILL provides oversight of subcontractor personnel who are exposed to traffic hazards.

SSC or DSC may consult with subcontractors when completing this checklist, but shall not direct the means and methods of traffic control operations nor direct the details of corrective actions. Subcontractors shall determine how to correct deficiencies, and we must carefully rely on their expertise. Items considered to be imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazard until corrected.

Completed checklists shall be sent to the HS&E Staff for review.

Project Name: _____ Project No.: _____

Location: _____ PM: _____

Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

- ☐ Evaluate CH2M HILL employee exposure to traffic hazards.
- ☐ Evaluate a CH2M HILL subcontractor's compliance with traffic control requirements.
- Subcontractors Name: _____

- Check "Yes" if an assessment item is complete/correct.
- Check "No" if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the subcontractor. Section 3 must be completed for all items checked "No."
- Check "N/A" if an item is not applicable.
- Check "N/O" if an item is applicable but was not observed during the assessment.

Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HS-24.

SECTION 1**SAFE WORK PRACTICES (3.1)**

	Yes	No	N/A	N/O
1. Personnel working on/adjacent to active roadways or in control zones are wearing safety vests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Traffic control plan (TCP) is consistent with roadway, traffic, and working conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. TCP has been approved by regulatory or contractual authority prior to work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. TCP considers all factors that may influence traffic related hazards and controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Work areas are protected by rigid barriers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Lookouts are used when applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Vehicles are parked 40 feet away from work zone or are equipped with hazard beacon/strobe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. TMCC or TMA vehicle is used where appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. All CH2M HILL traffic control devices conform to MUTCD standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Traffic control devices are inspected continuously.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Flagging is only used when other means of traffic control are inadequate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Additional traffic control zone controls have been implemented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Cranes do not swing loads/booms over nor do workers enter/cross live roadways (as defined).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>SECTION 2</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>N/O</u>
GENERAL (3.2.1)					
14. Lane closings are performed when required by this SOP.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Traffic control configurations are based on an engineering study of the location.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. If no study, traffic control is performed with approval of the authority having jurisdiction.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. TCP has been prepared and understood by all responsible parties prior to work.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Special preparation/coordination with external parties has been conducted where applicable.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. All contractor traffic control devices conform to MUTCD standards.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Traffic movement and flow are inhibited or disrupted as little as possible.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Supplemental equipment and activities do not interfere with traffic.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Drivers and pedestrians are considered when entering and traversing traffic control zone.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRAFFIC CONTROL ZONES (3.2.2)					
23. Traffic control zones are divided into the necessary five areas.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Advances warning area is designed based on conditions of speed, roadways, and driver needs.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Advanced warning signage is spaced according to roadway type and conditions.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Transition areas are used to channelize traffic around the work area.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Buffer areas are used to provide a margin of safety for traffic and workers.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. The buffer area is free of equipment, workers, materials, and worker vehicles.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. The length of the buffer area is two times the posted speed limit in feet.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. All work is contained in the work area and is closed to all traffic.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. A termination area is used to provide traffic to return to normal lanes.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. A downstream taper is installed in the termination area.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEVICE INSTALLATION AND REMOVAL (3.2.3)					
33. All vehicles involved with device installation/removal have hazard beacons/strobes.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Devices are installed according to the order established by this SOP.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Devices are removed in the opposite order of installation.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Tapers are used to move traffic out of its normal path.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Tapers are created using channelizing devices.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. The length of taper is determined by posted speed and width of lane to be closed (see formula).		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Local police or highway patrol assists during taper installation and removal.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. TMCC/ TMA vehicles are used to protect personnel during installation and removal of devices.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Cone trucks are equipped with platforms and railings.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Cones are the appropriate height for the specific roadway and are reflectorized.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Temporary sign supports are secured using sandbags to prevent movement.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Arrow panels are used on lane closures where required.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Concrete barriers are used where required.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Barrels, crash cushions, or energy absorbing terminals are used to protect traffic as required.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Changeable message signs (CMS) are used as required.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. CMS are not used to replace required signage.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. No more than two message panels are used in any message cycle on CMS.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FLAGGING (3.2.4)					
50. Flagging is used only when other traffic control methods are inadequate.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Only approved personnel with current certification are allowed to be used as flaggers.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Flaggers are located off the traveled portion of the roadway.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. A communication system is established when more than one flagger is used.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. Hand signaling by flaggers is by means of red flags, sign paddles, or red lights.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Flaggers are alert, positioned close enough to warn work crews, and easily identified from crew.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. An escape plan is established by crew and flaggers prior to traffic control set up.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. Signs indicating a flagger is present are used and removed as required.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 2

<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>N/O</u>
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INSPECTION AND MAINTENANCE (3.2.5)

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 58. Traffic control zones are monitored to determine their effectiveness under varying conditions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. Traffic control devices are inspected at the beginning and continuously during work shift. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 60. Traffic control devices are restored to their proper position immediately and continuously. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 61. Damaged, old, or ineffective devices are removed and replaced immediately and continuously. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 62. Devices using reflected light for illumination are cleaned and monitored continuously. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SECTION 3

Complete this section for all items checked “No” in Sections 1 or 2. Deficient items must be corrected in a timely manner.

[illegible]

Auditor: _____ Project Manager: _____

CH2MHILL

H&S Self-Assessment Checklist – HAND AND POWER TOOLS

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project's HSP/FSI.

This checklist is to be used at locations where: 1) CH2M HILL employees are exposed to hand and power tool hazards and/or 2) CH2M HILL provides oversight of subcontractor personnel who are exposed to hand and power tool hazards.

SSC or DSC may consult with subcontractors when completing this checklist, but shall not direct the means and methods of hand and power tool use nor direct the details of corrective actions. Subcontractors shall determine how to correct deficiencies and we must carefully rely on their expertise. Items considered to be imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazard until corrected.

Completed checklists shall be sent to the HS&E Staff for review.

Project Name: _____ Project No.: _____

Location: _____ PM: _____

Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

- ☐ Evaluate CH2M HILL employee exposure to hand and power tool hazards.
☐ Evaluate a CH2M HILL subcontractor's compliance with hand and power tool requirements.
Subcontractors Name: _____

- Check "Yes" if an assessment item is complete/correct.
- Check "No" if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the subcontractor. Section 3 must be completed for all items checked "No."
- Check "N/A" if an item is not applicable.
- Check "N/O" if an item is applicable but was not observed during the assessment.

Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HS-50.

SECTION 1

Yes No N/A N/O

SAFE WORK PRACTICES (3.1)

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. All tools operated according to manufacturer's instructions and design limitations. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. All hand and power tools maintained in a safe condition and inspected and tested before use. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Defective tools are tagged and removed from service until repaired. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. PPE is selected and used according to tool-specific hazards anticipated. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Power tools are not carried or lowered by their cord or hose. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Tools are disconnected from energy sources when not in use, servicing, cleaning, etc. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Safety guards remain installed or are promptly replaced after repair. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Tools are stored properly. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Cordless tools and recharging units both conform to electrical standards and specifications. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Tools used in explosive environments are rated for such use. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Knife or blade hand tools are used with the proper precautions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Consider controls to avoid muscular skeletal, repetitive motion, and cumulative trauma stressors. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

H&S Self-Assessment Checklist – HAND AND POWER TOOLS

<u>SECTION 2</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>N/O</u>
GENERAL (3.2.1)				
13. PPE is selected and used according to tool-specific hazards anticipated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Tools are tested daily to assure safety devices are operating properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Damaged tools are removed from service until repaired.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Power operated tools designed to accommodate guards have guards installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Rotating or moving parts on tools are properly guarded.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Machines designed for fixed locations are secured or anchored.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Floor and bench-mounted grinders are provided with properly positioned work rests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Guards are provided at point of operation, nip points, rotating parts, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Fluid used in hydraulic-powered tools is approved fire-resistant fluid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ELECTRIC-POWERED TOOLS (3.2.2)				
22. Electric tools are approved double insulated or grounded and used according to SOP HS-23.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Electric cords are not used for hoisting or lowering tools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Electric tools are used in damp/ wet locations are approved for such locations or GFCI installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Hand-held tools are equipped with appropriate on/off controls appropriate for the tool.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Portable, power-driven circular saws are equipped with proper guards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ABRASIVE WHEEL TOOLS (3.2.3)				
27. All employees using abrasive wheel tools are wearing eye protection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. All grinding machines are supplied with sufficient power to maintain spindle speed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Abrasive wheels are closely inspected and ring-tested before use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Grinding wheels are properly installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Cup-type wheels for external grinding are protected by the proper guard or flanges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Portable abrasive wheels used for internal grinding are protected by safety flanges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Safety flanges are used only with wheels designed to fit the flanges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Safety guards on abrasive wheel tools are mounted properly and of sufficient strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PNEUMATIC-POWERED TOOLS (3.2.4)				
35. Tools are secured to hoses or whip by positive means to prevent disconnection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Safety clips or retainers are installed to prevent attachments being expelled.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety devices are installed on automatic fastener feed tools as required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Compressed air is not used for cleaning unless reduced to < 30 psi, with PPE, and guarded.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Manufacturer's safe operating pressure for hoses, pipes, valves, etc. are not exceeded.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Hoses are not used for hoisting or lowering tools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. All hoses >1/2-inch diameter have safety device at source to reduce pressure upon hose failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Airless spray guns have required safety devices installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Blast cleaning nozzles are equipped with operating valves, which are held open manually.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Supports are provided for mounting nozzles when not in use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Air receiver drains, handholes, and manholes are easily accessible.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Air receivers are equipped with drainpipes and valves for removal of accumulated oil and water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Air receivers are completely drained at required intervals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Air receivers are equipped with indicating pressure gauges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Safety, indicating, and controlling devices are installed as required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Safety valves are tested frequently and at regular intervals to assure good operating condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 2 (continued)**Yes No N/A N/O****LIQUID FUEL-POWERED TOOLS (3.2.5)**

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 51. Liquid fuel-powered tools are stopped when refueling, servicing, or maintaining. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. Liquid fuels are stored, handled, and transported in accordance with SOP HS-21 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. Liquid fuel-powered tools are used in confined spaces in accordance with SOP HS-17. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. Safe operating pressures of hoses, valves, pipes, filters, and other fittings are not exceeded. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

POWDER-ACTUATED TOOLS (3.2.6)

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 55. Only trained employee operates powder-actuated tools. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. Powder-actuated tools are not loaded until just prior to intended firing time. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. Tools are not pointed at any employee at any time. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. Hands are kept clear of open barrel end. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. Loaded tools are not left unattended. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 60. Fasteners are not driven into very hard or brittle materials. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 61. Fasteners are not driven into easily penetrated materials unless suitable backing is provided. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 62. Fasteners are not driven into spalled areas. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 63. Powder-actuated tools are not used in an explosive or flammable atmosphere. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 64. All tools are used with correct shields, guards, or attachments recommended by manufacturer. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

JACKING TOOLS (3.2.7)

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 65. Rated capacities are legibly marked on jacks and not exceeded. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 66. Jacks have a positive stop to prevent over-travel. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 67. The base of jacks are blocked or cribbed to provide a firm foundation, when required. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 68. Wood blocks are placed between the cap and load to prevent slippage, when required. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 69. After load is raised, it is cribbed, blocked, or otherwise secured immediately. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 70. Antifreeze is used when hydraulic jacks are exposed to freezing temperatures. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 71. All jacks are properly lubricated. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 72. Jacks are inspected as required. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 73. Repair or replacement parts are examined for possible defects. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 74. Jacks not working properly are removed from service and repaired or replaced. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

HAND TOOLS (3.2.8)

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| 75. Wrenches are not used when jaws are sprung to the point of slippage. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 76. Impact tools are kept free of mushroomed heads. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 77. Wooden handles of tools are kept free of splinters or cracks and are tightly fitted in tool. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SECTION 3

Complete this section for all items checked "No" in Sections 1 or 2. Deficient items must be corrected in a timely manner.

Item #	Corrective Action Planned/Taken	Date Corrected

Auditor: _____ Project Manager: _____

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project's HSP/FSI.

This checklist is to be used at locations where: 1) CH2M HILL employees are potentially exposed to the hazards of earthmoving equipment operations, 2) CH2M HILL employees are operating earthmoving equipment, and/or 3) CH2M HILL provides oversight of a subcontractor operating earthmoving equipment.

The CH2M HILL Safety Coordinator may consult with subcontractors operating earthmoving equipment when completing this checklist, but shall not direct the means and methods of equipment operations nor direct the details of corrective actions. Earthmoving equipment subcontractors shall determine how to correct deficiencies and we must carefully rely on their expertise. Items considered to be imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazard until corrected.

Project Name: _____ Project No.: _____

Location: _____ PM: _____

Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

- ☐ Evaluate CH2M HILL employee exposures to earthmoving equipment hazards (complete Section 1).
☐ Evaluate CH2M HILL employees operating earthmoving equipment (complete entire checklist).
☐ Evaluate CH2M HILL subcontractor's compliance with earthmoving equipment safety requirements (complete entire checklist). Subcontractors Name: _____

- Check "Yes" if an assessment item is complete/correct.
- Check "No" if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the earthmoving equipment subcontractor. Section 3 must be completed for all items checked "No."
- Check "N/A" if an item is not applicable.
- Check "N/O" if an item is applicable but was not observed during the assessment.

Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HSE-27.

SAFE WORK PRACTICES (3.1)**SECTION 1****Yes No N/A N/O**

1. Personnel maintaining safe distance from operating equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Positioning personnel in close proximity to operating equipment is avoided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Personnel wearing high-visibility and/or reflective vests when close to operating equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Personnel approach operating equipment safely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Personnel riding only in seats of equipment cab and using seat belts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Personnel not positioned under elevated portions of equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Personnel not positioned under hoisted loads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Personnel not hoisted by equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Personnel do not to approach equipment that has become electrically energized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Personnel wearing appropriate PPE, per HSP/FSI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EQUIPMENT SAFETY REQUIREMENTS PRIOR TO OPERATING EQUIPMENT (3.2.1)	<u>SECTION 2</u>	Yes	No	N/A	N/O
11. Only qualified and authorized personnel operating equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Daily safety briefing/meeting conducted with equipment operators		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Daily inspection of equipment conducted and documented		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Modifications and attachments used approved by equipment manufacturer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Backup alarm or spotter used when backing equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Operational horn provided on bi-directional equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Seat belts are provided and used		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Rollover protective structures (ROPS) provided		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Braking system capable of stopping full payload		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Headlights and taillights operable when additional light required		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Brake lights in operable condition		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Cab glass provides no visible distortion to the operator		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. All machine guards are in place		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Hauling equipment (dump trucks) provided with cab shield or canopy		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Dump truck beds provided with positive means of support during maintenance or inspection		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Dump truck operating levers provided with latch to prevent accidental dumping		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Air monitoring conducted per HSP/FSI for hazardous atmospheres		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EQUIPMENT PLACEMENT (3.2.2)					
28. Equipment position on firm/level surface, outriggers used		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Location of underground utilities identified		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Safe clearance distance maintained while working under overhead power lines		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Safe distance is maintained while traveling under power lines		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Warning system used to remind operator of excavation edge		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Unattended equipment visibly marked at night		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Tools lowered/parking brake set when not in use, wheels chocked when parked on incline		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EQUIPMENT OPERATION (3.2.3)					
35. Equipment operated on safe roadways and grades		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Equipment operated at safe speed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Operators maintain unobstructed view of travel path		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Equipment not operated during inclement weather, lightning storms		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Equipment started and moved safely		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Operators keep body parts inside cab during operation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Vehicle occupants in safe position while loading/unloading		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Signal person visible to operator when required		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Equipment used for hoisting done according to equipment manufacturer specifications		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Lifting and hauling capacities are not exceeded		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EQUIPMENT MAINTENANCE (3.2.4)					
45. Defective components repaired immediately		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Suspended equipment or attachments supported prior to work under or between		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Lockout/tagout procedures used prior to maintenance		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Tires on split rims removed using safety tire rack or cage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Good housekeeping maintained on and around equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXCAVATING AT HAZARDOUS WASTE SITES (3.2.5)					
50. Waste disposed of according to HSP/FSI		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Appropriate decontamination procedures being followed, per HSP/FSI		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 3

Complete this section for all items checked “No” in Sections 1 or 2. Deficient items must be corrected in a timely manner.

[illegible]

Auditor: _____ Project Manager: _____

Attachment 6

Safe Work Observation Form

Safe Work Observation Form			
Project: McComas Street – Residential Remedial Action – Private Residences		Observer:	Date:
Position/Title of worker observed:		Background Information/ comments:	
Task/Observation Observed: _____			
<ul style="list-style-type: none"> ❖ Identify and reinforce safe work practices/behaviors ❖ Identify and improve on at-risk practices/acts ❖ Identify and improve on practices, conditions, controls, and compliance that eliminate or reduce hazards ❖ Proactive PM support facilitates eliminating/reducing hazards (do you have what you need?) ❖ Positive, corrective, cooperative, collaborative feedback/recommendations 			
Actions & Behaviors	Safe	At-Risk	Observations/Comments
Current & accurate Pre-Task Planning/Briefing (Project safety plan, STAC, AHA, PTSP, tailgate briefing, etc., as needed)			Positive Observations/Safe Work Practices:
Properly trained/qualified/experienced			
Tools/equipment available and adequate			
Proper use of tools			Questionable Activity/Unsafe Condition Observed:
Barricades/work zone control			
Housekeeping			
Communication			
Work Approach/Habits			
Attitude			
Focus/attentiveness			
Pace			Observer's Corrective Actions/Comments:
Uncomfortable/unsafe position			
Inconvenient/unsafe location			
Position/Line of fire			
Apparel (hair, loose clothing, jewelry)			
Repetitive motion			Observed Worker's Corrective Actions/Comments:
Other...			

Attachment 7
Project-Specific Chemical Product Hazard
Communication Form

Attachment 8

Applicable Material Safety Data Sheets

Attachment 9

Chemical-Specific Training Form

CHEMICAL-SPECIFIC TRAINING FORM

Location:

Project # :

HCC:

Trainer:

TRAINING PARTICIPANTS:

NAME	SIGNATURE	NAME	SIGNATURE

REGULATED PRODUCTS/TASKS COVERED BY THIS TRAINING:

The HCC shall use the product MSDS to provide the following information concerning each of the products listed above.

- ☐ Physical and health hazards
- ☐ Control measures that can be used to provide protection (including appropriate work practices, emergency procedures, and personal protective equipment to be used)
- ☐ Methods and observations used to detect the presence or release of the regulated product in the workplace (including periodic monitoring, continuous monitoring devices, visual appearance or odor of regulated product when being released, etc.)

Training participants shall have the opportunity to ask questions concerning these products and, upon completion of this training, will understand the product hazards and appropriate control measures available for their protection.

Copies of MSDSs, chemical inventories, and CH2M HILL's written hazard communication program shall be made available for employee review in the facility/project hazard communication file.

Attachment 10

Biological Hazard Information

Tick-Borne Pathogens

There are six tick-borne pathogens that present a significant field hazard, and in some areas account for more than half of our serious field incidents. These procedures should be applied during any field activity where vegetation is present.

Hazard Control

The methods for controlling exposure to ticks include, in order of most-preferred to least:

- Avoiding tick habitats and ceasing operations in heavily infested areas
- Reducing tick abundance through habitat disruption or application of acaricide
- Personal protection through use of repellants and protective clothing
- Frequent tick inspections and proper hygiene

Vaccinations are not available and preventative antibiotic treatment after a bite is generally not recommended.

Avoidance and Reduction of Ticks

To the extent practical, tick habitats should be avoided. In areas with significant tick infestation, consider stopping work and withdrawing from area until adequate tick population control can be achieved. Stopping and withdrawing should be considered as seriously as entering an area without proper energy control or with elevated airborne contaminants – tick-borne pathogens present risk of serious illness!

In areas where significant population density or infestation exists, tick reduction should be considered. Tick reduction can be achieved by disrupting tick habitats and/or direct population reduction through the use of tick-toxic pesticides (Damminix, Dursban, Sevin, etc.).

Habitat disruption may include only simple vegetative maintenance such as removing leaf litter and trimming grass and brush. Tick populations can be reduced between 72 and 100% when leaf litter alone is removed. In more heavily infested areas, habitat disruption may include grubbing, tree trimming or removal, and pesticide application (Damminix, Dursban, Sevin, etc.). This approach is practical in smaller, localized areas or perimeter areas that require occasional access. Habitat controls are to be implemented with appropriate health and safety controls, in compliance with applicable environmental requirements, and may be best left to the property owner or tenant, or licensed pesticide vendor. Caution should be exercised when using chemical repellents or pesticides in or around areas where environmental or industrial media samples will be collected for analysis.

Personal Protection

After other prevention and controls are implemented, personal protection is still necessary in controlling exposure to ticks. Personal protection must include all of the following steps:

- So that ticks may be seen on your clothing wear light-colored clothing. Full-body New Tyvek (paper-like disposable coveralls) may also be used.
- To prevent ticks from getting underneath clothing tuck pant legs into socks or tape to boots.
- Wear long-sleeved shirts, a hat, and high boots.
- Apply DEET repellent to exposed skin or clothing per product label.

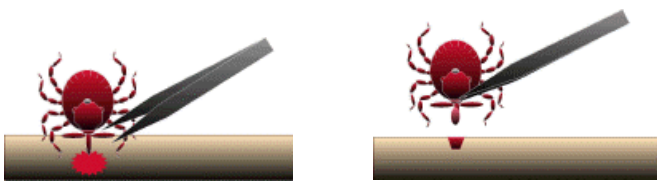
- Apply permethrin repellent to the outside of boots and clothing before wearing, per product label.
- Frequently check for ticks and remove from clothing.
- At the end of the day search your entire body for ticks (particularly groin, armpits, neck and head) and shower.
- To prevent pathogen transmission through mucous membranes or broken/cut skin, wash or disinfect hands and/or wear surgical-style nitrile gloves anytime ticks are handled.

Pregnant individuals and individuals using prescription medications should consult with their physician and/or pharmacists before using chemical repellents. Because human health effects may not be fully known, use of chemical repellents should be kept to a minimum frequency and quantity. Always follow manufacturers' use instructions and precautions. Wash hands after handling, applying, or removing protective gear and clothing. Avoid hand-to-face contact, eating, drinking, smoking, etc. when applying or using repellents. Remove and wash clothes per repellent product label. Chemical repellents should not be used on infants and children.

Vaccinations are generally not available for tick-borne pathogens. Although production of the LYMERix™ Lyme disease vaccination has been ceased, vaccination may still be considered under specific circumstances and with concurrence from the consulting physician. Preventative antibiotic treatment in non-ill individuals who have had a recent tick bite is recommended in specific cases only.

Tick Removal

1. Use fine-tipped tweezers or shield your fingers with a tissue, paper towel, or nitrile gloves.
2. Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Do not twist or jerk the tick; this may cause the mouthparts to break off and remain in the skin. (If this happens, remove mouthparts with tweezers. Consult your healthcare provider if infection occurs.)



3. Do not squeeze, crush, or puncture the body of the tick because its fluids (saliva, hemolymph, and gut contents) may contain infectious organisms. Releasing these organisms to the outside of the tick's body or into the bite area may increase the chance of infectious organism transmission.
4. Do not handle the tick with bare hands because infectious agents may enter through mucous membranes or breaks in the skin. This precaution is particularly directed to individuals who remove ticks from domestic animals with unprotected fingers. Children, elderly persons, and immunocompromised persons may be at greater risk of infection and should avoid this procedure.

5. After removing the tick, thoroughly disinfect the bite site and wash your hands with soap and water.
6. You may wish to save the tick for identification in case you become ill. Your doctor can use the information to assist in making an accurate diagnosis. Place the tick in a plastic bag and put it in your freezer. Write the date of the bite on a piece of paper with a pencil and place it in the bag.

Note: Folklore remedies such as petroleum jelly or hot matches do little to encourage a tick to detach from skin. In fact, they may make matters worse by irritating the tick and stimulating it to release additional saliva, increasing the chances of transmitting the pathogen. These methods of tick removal should be avoided. In addition, a number of tick removal devices have been marketed, but none are better than a plain set of fine tipped tweezers.

First-Aid and Medical Treatment

Tick bites should always be treated with first-aid. Clean and wash hands and disinfect the bite site after removing embedded tick. Consult a healthcare professional if infection or symptoms and effects if tick-borne illnesses are develop.

Medical treatment for tick-borne infections include antibiotics and other medical interventions. Diagnosis of specific illness involves both clinical and laboratory confirmations. Preventative antibiotic treatment in non-ill individuals who have had a recent tick bite is recommended in specific cases only.

Previously infected individuals are not conferred immunity – re-infection from future tick bites can occur even after a person has contracted a tick-borne disease.

Hazard Recognition

An important step in controlling tick related hazards is understanding how to identify ticks, their habitats, their geographical locations, and signs & symptoms of tick-borne illnesses.

Tick Identification

There are five varieties of hard-bodied ticks that have been associated with tick-borne pathogens. These tick varieties include:

- Deer (Black Legged) Tick (eastern and pacific varieties)
- Lone Star Tick
- Dog Tick
- Rocky Mountain Wood Tick

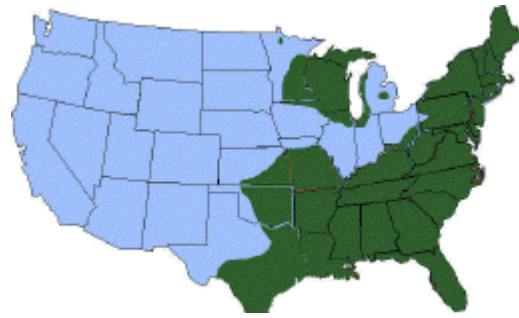
These varieties and their geographical locations are illustrated on the following page.

Tick Habitat

In eastern states, ticks are associated with deciduous forest and habitat containing leaf litter. Leaf litter provides a moist cover from wind, snow, and other elements. In the north-central states, is generally found in heavily wooded areas often surrounded by broad tracts of land cleared for agriculture. On the Pacific Coast, the bacteria are transmitted to humans by the western black-legged (deer) tick and habitats are more diverse. Here, ticks have been found in habitats with forest, north coastal scrub, high brush, and open grasslands. Coastal tick populations thrive in areas of high rainfall, but ticks are also found at inland locations.



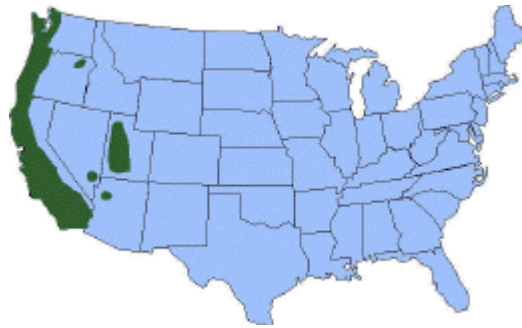
Deer Tick



Distribution of Deer Tick (dark green)



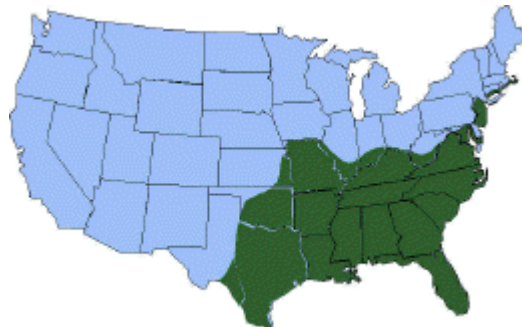
From Left: adult female, adult male, nymph, and larvae Deer Tick (cm scale)



Distribution of Pacific Deer Tick (dark green)



Lone Star Tick



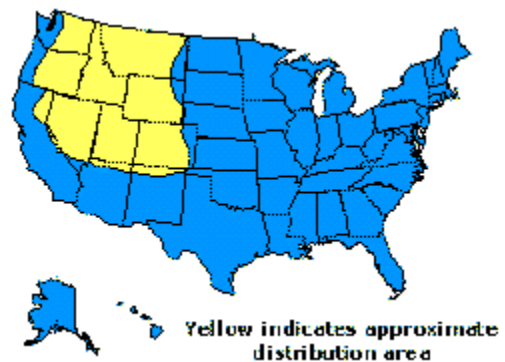
Distribution of Lone Star Tick (Green)



Dog Tick



Rocky Mountain Wood Tick



Illnesses and Signs & Symptoms

There are six notifiable tick-borne pathogens that cause human illness in the United States. These pathogens may be transmitted during a tick bite – normally hours after attachment. The illnesses, presented in approximate order of most common to least, include:

- Lyme (bacteria)
- RMSF (bacteria)
- Ehrlichiosis (bacteria)
- STARI (Southern Tick-Associated Rash Illness) (bacteria)
- Tularemia (Rabbit Fever) (bacteria)
- Babesia (protozoan parasite)

Symptoms will vary based on the illness, and may develop in infected individuals typically between 3 and 30 days after transmission. Some infected individuals will not become ill or may develop only mild symptoms. These illnesses present with some or all of the following signs & symptoms: fever, headache, muscle aches, stiff neck, joint aches, nausea, vomiting, abdominal pain, diarrhea, malaise, weakness, small solid, ring-like, or spotted rashes. The bite site may be red, swollen, or develop ulceration or lesions. A variety of long-term symptoms may result when untreated, including debilitating effects and death.

Poison Oak, Ivy and Sumac

Poison oak, ivy and sumac plants are the single most common cause of allergic skin reactions in the United States. They are caused by contact with urushiol (you-ROO-shee-ol), which is found in the sap of the plants. It is colorless or pale yellow oil that oozes from any cut or crushed part of the plant, including the roots, stems and leaves. The oil is active year round. Reaction to Poison Oak, Ivy, and Sumac ranges from no reaction to a severe “rhus” dermatitis. Rhus is the class of poisonous plants which includes poison oak, poison ivy, poison sumac, mango, and other urushiol containing plants. 3 of 4 people will develop dermatitis on contact with urushiol.

Contact with urushiol can occur in three ways: direct, indirect and airborne particles. Direct contact is touching the sap of the toxic plant, while indirect contact involves touching something which has urushiol on it, such as personal protective equipment (PPE), clothes, boots, field equipment, or any items that have come in contact with the plant (including your hands). Airborne urushiol particles, such as burning plants or spray from a weed whacker, may also contact the skin or be inhaled, causing internal inflammation.

The rash caused by urushiol can affect almost any part of the body, especially where the skin is thin, such as the face. The rash does not spread, although it may seem to when it breaks out in new areas. Actually, what happens is the urushiol absorbs more slowly into thicker skin, such as found on the forearms, legs and trunk.

Identification

Poison Oak

Poison oak shrubs are usually 12" to 30" high, or a tree-climbing vine, with triple leaflets and short, smooth hair underneath. A project site in Portland had 8' tall poison oak bushes. Early berries are fuzzy and white; later, dun-colored. Plants are red and dark green in spring and summer; with yellowing leaves anytime especially in dry areas. Leaves may achieve bright reds

in fall, but the plant loses its (yellowed, then brown) leaves in winter, leaving toxic stems. All parts of the plant remain toxic throughout the seasons.

Poison Ivy

Poison ivy plants are frequently found around lakes and streams in the Midwestern and the Eastern parts of the United States and are commonly found growing along trails and roadsides. Poison ivy grows as a woody, ropelike vine that can grow along fences or up trees, a trailing shrub on the ground, or a free-standing shrub. It normally has three leaflets (groups of leaves all on the same small stem coming off the larger main stem), but may vary from groups of three to nine. Poison ivy leaves are green in the summer and red in the fall with yellow or green flowers and white berries.

Poison Sumac

Poison sumac plants grow in boggy areas, especially in the Southeastern United States. Typically, poison sumac grows as a rangy shrub up to 15 feet tall. The plants are found to have seven to 13 smooth-edged leaflets and can have glossy pale yellow or cream-colored berries.

Primary contamination from poison oak, ivy or sumac, results from contact with bruised or broken plant parts that release "toxicodendrol", an oily resin containing the toxic chemical "urushiol".



Poison Ivy



Poison Sumac



Poison Oak

Exposure

Contamination with poison oak, ivy or sumac can happen through several pathways. These include

- Direct skin contact with any part of the plant.
- Contact with clothing that has been contaminated
- Contact from removing shoes that have been contaminated. (your shoes are coated with oil)
- Sitting in a vehicle that has become contaminated
- Contact with any objects or tools that have become contaminated.

Exposure to poison oak, ivy or sumac often becomes an OSHA recordable illness. The dermatitis is so severe that many people seek medical care and get prescription cortisone creams or steroid shots to reduce the suffering caused by the itch. If exposed, refer to the CH2M HILL HSE&Q Injury and Illness Reporting brochure for proper action to take if contaminated.

Best Work Practices

If you must work on a site that has been identified to potentially contain poison oak, ivy or sumac, the following precautions are necessary:



Identify plants containing urushiol – The best way to prevent exposure is to recognize the plant and avoid working in areas where poison oak, ivy or sumac is present.



If you must work in areas with urushiol containing plants, contact your project manager and health and safety manager to determine the best procedures to prevent contamination.



Do not drive vehicles onto the site where it will come into contact with poison oak, ivy or sumac. Vehicles which need to work in the area, such as drill rigs or heavy equipment must be washed and decontaminated as soon as possible after leaving the site.



All tools used in the area, including those used to cut back the plants, surveying instruments used in the area, air monitoring equipment or other test apparatus must be decontaminated before they are placed back into the site vehicle. If on-site decontamination is not possible, use plastic to wrap any tools or equipment until they can be decontaminated. If working on or near the ground surface, place plastic on the ground to cover the grass and foliage.



Personal protective equipment (PPE), including tyvek coveralls, gloves, and boot covers must be worn. PPE and plastic used to cover the ground must be placed into separate plastic bags and sealed if they are not disposed immediately into a trash receptacle.



Shower as soon as possible to remove any potential contamination. Any body part with suspected or actual exposure should be washed with “Tecnu” or other product designed for removing urushiol. If you do not have Tecnu wash with cold water. Do not take a bath, as the oils can form an invisible film on top of the water and contaminate your entire body upon exiting the bath.



Zanfel™ may also be used to treat exposed areas that are experiencing signs and symptoms of poison oak, ivy or sumac contamination. The CH2M HILL warehouses carry Zanfel™ products, which must be carried in First Aid Kits as deemed appropriate. Refer to the Zanfel™ information guide below for specific product and contact information.



Use products such as IvyBlock™ to prevent poison oak, ivy and sumac contamination. IvyBlock™ is approved by the FDA to prevent the rash caused by poison oak, ivy and sumac.

If there is exposure use the following first aid procedures, or others you may find to alleviate the pain and itching.



Poison Oak, Ivy, and Sumac First Aid

<p>Are there any of these problems?</p> <ul style="list-style-type: none"> • Swelling in the throat, tongue and/or lips • A hard time breathing or swallowing • Weakness, dizziness • Bluish lips and mouth • Unconsciousness <p>NO</p>	<p>YES</p> <p>Give First Aid</p> <p>Seek Emergency Care</p> <p>Use emergency kit with adrenalin, if available, and Get Emergency Care.</p>
<p>Do you have any of these problems?</p> <ul style="list-style-type: none"> • Skin that is very bright red. • Pus. • Rash that has spread to the mouth, eyes or genitals. • Rash on large areas of the body or the face. <p>NO</p>	<p>YES</p> <p>Give First Aid</p> <p>See Doctor</p> <p>Give first aid before seeing doctor:</p> <ul style="list-style-type: none"> • Take a hot shower (only after rash develops), put the rash area in hot water or pour hot water over it. Make sure the water is not too hot to burn the skin. The hot water causes itching at first, but brings relief later. Do not use soap. • Take an over-the-counter antihistamine, such as Benadryl, as stated on the label. • For weeping blisters: • Mix 2 teaspoons of baking soda in 1 quarter (4 cups) of water. • Dip squares of gauze in this mixture. • Cover the blisters with the wet gauze for 10 minutes, four times a day. (Do not apply this to the eyes.)
<p>Provide Self-Care</p>	

Urushiol Plant Facts

Urushiol Oil is Potent

- Only 1 nanogram (billionth of a gram) needed to cause rash
- Average is 100 nanograms for most people
- 1/4 ounce of urushiol is all that is needed to cause a rash in every person on earth
- 500 people could itch from the amount covering the head of a pin
- Specimens of urushiol several centuries old have found to cause dermatitis in sensitive people.
- 1 to 5 years is normal for urushiol oil to stay active on any surface including dead plants
- Derived from **urushi**, Japanese name for lacquer

Myth 	Fact 
Poison oak, ivy, and sumac are contagious	Rubbing the rashes won't spread poison ivy to other parts of your body (or to another person). You spread the rash only if urushiol oil -- the sticky, resinlike substance that causes the rash -- has been left on your hands.
You can catch poison ivy simply by being near the plants	Direct contact is needed to release urushiol oil . Stay away from forest fires, direct burning, or anything else that can cause the oil to become airborne such as a lawnmower, trimmer, etc.
Leaves of three, let them be	Poison sumac has 7 to 13 leaves on a branch, although poison ivy and oak have 3 leaves per cluster
Do not worry about dead plants	Urushiol oil stays active on any surface, including dead plants, for up to 5 years.
Breaking the blisters releases urushiol oil that can spread	Not true. But your wounds can become infected and you may make the scarring worse. In very extreme cases, excessive fluid may need to be withdrawn by a doctor.

New Cream to Treat Exposure to Poison Plants

Exposure to poison oak, ivy and sumac can be uncomfortable, and in some cases the rash can become so severe that medical care is required. A new product is available Zanafel™ (www.zanafel.com) that helps prevent blistering and itching from becoming severe. If you are working in an area with poison oak, ivy or sumac, you can obtain this cream by contacting your regional Safety Program Assistants (SPAs):

SWR: Julie Yeager/SAC

NER: Lynn Bong/MKE

NWR: Donita O'Brien/SEA

SER: Vanessa Wheelus/GNV

CNR: Donita O'Brien/SEA

Please remember, the cream does not replace preventative measures, including:

- Avoiding contact with poison oak, ivy and sumac.
- Wearing Tyvek coveralls and gloves to prevent contact.
- Washing with Tecnu® (or a similar product) after potential exposure.
- Washing clothing and decontaminating equipment with an oil-cutting detergent.

More information about Zanafel (from Zanafel):

Zanafel™ is an effective wash for urushiol-induced contact dermatitis. Urushiol is the toxin known to cause the itching and rash associated with poison oak, ivy, sumac, poisonwood, and related plants. Zanafel works by surrounding urushiol and bonding with it, thereby enabling it to be rinsed away. Unlike some products that require use within 10-20 minutes of contact or that required continued use until the rash is gone (which can take up to 5 weeks), Zanafel offers relief at any stages of the reaction and often with only one wash. Individuals with particularly severe reactions may require additional washes. Most individuals experience relief from the itching within 30 seconds of application. The rash will begin to subside within hours if the reaction is mild to moderate. Severe and systemic cases will still require medical attention. Severe cases are defined as breakouts that are present on more than 15-percent of the body, and new breakouts continue to develop after day 4.

BROWN RECLUSE SPIDER



Its size - Adult brown recluse spiders have a leg span about the size of a quarter. Their body is about $\frac{3}{8}$ inches long and about $\frac{3}{16}$ inches wide. Males are slightly smaller in body length than females, but males have proportionally longer legs. Both sexes are venomous

Recluse spiders have been known to inhabit most of the lower 48 states; however its typical range is shown on the attached map.

- If bitten stay calm, immediately apply ice to the bite and to try and collect the spider (said even a mangled part of the spider might help a professional with a diagnosis) and go to the ER.
- Shake out clothing and shoes before getting dressed.
- Inspect bedding and towels before use.
- Wear gloves when handling firewood, lumber, and rocks (be sure to inspect the gloves for spiders before putting them on).
- Remove bed skirts and storage boxes from underneath beds. Move the bed away from the wall.
- Exercise care when handling cardboard boxes (recluse spiders often are found in the space under folded cardboard flaps)



Attachment 11
Drug Testing Hospital Kit Notice

HOSPITAL KIT NOTICE

You are receiving this package because you are listed as a Project Manager and/or Superintendent/CM who is managing a CCI project which requires drug testing. The items in the package, known as a 'hospital kit', are needed if there is a serious injury requiring medical care on your project.

It is your responsibility to make certain that this hospital kit is onsite at all times while construction is in progress.

For minor injuries - Hospital Kits are NOT required. After the injury is treated, the injured employee will be tested at the emergency care clinic or you can take the injured employee to the usual laboratory collection facility. Both the emergency care clinic and the laboratory collection facility already have drug testing kits and you will only be responsible to provide them with your normal Custody and Control Form (CCF) in order for the employee to be tested.

For more serious injuries that require hospital, ambulance, or paramedic care, we need to provide the collector with the 'hospital kit' in order for the drug test specimen to be properly collected. This package *contains everything that the medical provider will need* to collect the sample. It is critical that the 'hospital kit' accompanies all injured employee(s) to the hospital so they will get drug tested. If more than one employee is injured, you must send one kit for each employee that is to receive care at the hospital. After the kit is used, you must immediately contact Elaine Senecal/ORL to get a replacement kit. These kits must remain onsite and be available for emergencies at all times.

Location for Baltimore, Md:

Contact Elaine Senecal (407-423-0001 x240) for location nearest your project site location.

CH2M HILL Personnel also need on-line training:

http://www.int.ch2m.com/safety_counts/Training_Basic_Modules/Drug_desc.html

Attachment 12
Incident Report Form and
Root Cause Investigation Information

CH2MHILL

Incident Report Form (Hardcopy)

Fax completed form to:

425.462.5957

CH2M HILL Seattle Office

Attention: Corporate HS&E Department

Type of Incident (Select at least one)

- | | | |
|---|--|--|
| <input type="checkbox"/> Injury/Illness | <input type="checkbox"/> Property Damage | <input type="checkbox"/> Spill/Release |
| <input type="checkbox"/> Environmental/Permit Issue | <input type="checkbox"/> Near Miss | <input type="checkbox"/> Other |

General Information (Complete for all incident types)

Preparer's Name: _____ Preparer's Employee Number: _____

Date of Report: _____ Date of Incident: _____ Time of Incident: _____ am/pm

Type of Activity (Provide activity being performed that resulted in the incident)

- | | | |
|--|--|--|
| <input type="checkbox"/> Asbestos Work | <input type="checkbox"/> Excavation Trench-Non Haz | <input type="checkbox"/> Process Safety Management |
| <input type="checkbox"/> Confined Space Entry | <input type="checkbox"/> Facility Walk Through | <input type="checkbox"/> Tunneling |
| <input type="checkbox"/> Construction Mgmt- Haz Waste | <input type="checkbox"/> General Office Work | <input type="checkbox"/> Welding |
| <input type="checkbox"/> Construction Mgmt - Non-Haz Waste | <input type="checkbox"/> Keyboard Work | <input type="checkbox"/> Wetlands Survey |
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Laboratory | <input type="checkbox"/> Working from Heights |
| <input type="checkbox"/> Drilling-Haz Waste | <input type="checkbox"/> Lead Abatement | <input type="checkbox"/> Working in Roadways |
| <input type="checkbox"/> Drilling-Non Haz Waste | <input type="checkbox"/> Motor Vehicle Operation | <input type="checkbox"/> WWTP Operation |
| <input type="checkbox"/> Drum Handling | <input type="checkbox"/> Moving Heavy Object | |
| <input type="checkbox"/> Electrical Work | <input type="checkbox"/> Other (Specify) _____ | |
| <input type="checkbox"/> Excavation Trench-Haz Waste | | |

Location of Incident (Select one)

- ☐ Company Premises (CH2M HILL Office: _____)
- ☐ Field (Project #: _____ Project/Site Name: _____ Client: _____)
- ☐ In Transit (Traveling from: _____ Traveling to: _____)
- ☐ At Home

Geographic Location of Incident (Select region where the incident occurred)

- | | | |
|------------------------------------|------------------------------------|---|
| <input type="checkbox"/> Northeast | <input type="checkbox"/> Southwest | <input type="checkbox"/> Asia Pacific |
| <input type="checkbox"/> Southeast | <input type="checkbox"/> Corporate | <input type="checkbox"/> Europe Middle East |
| <input type="checkbox"/> Northwest | <input type="checkbox"/> Canadian | <input type="checkbox"/> Latin America |

If a CH2M HILL subcontractor was involved in the incident, provide their company name and phone number: _____

Describe the Incident (Provide a brief description of the incident): _____

Injured Employee Data (Complete for Injury/Illness incidents only)

If CH2M HILL employee injured

Employee Name: _____ Employee Number: _____

If CH2M HILL Subcontractor employee injured

Employee Name: _____ Company: _____

Injury Type

- ☐ Allergic Reaction
- ☐ Amputation
- ☐ Asphyxia
- ☐ Bruise/Contusion/ Abrasion
- ☐ Burn (Chemical)
- ☐ Burn/Scald (Heat)
- ☐ Cancer
- ☐ Carpal Tunnel
- ☐ Concussion
- ☐ Cut/Laceration
- ☐ Dermatitis
- ☐ Dislocation

- ☐ Electric Shock
- ☐ Foreign Body in eye
- ☐ Fracture
- ☐ Freezing/Frost Bite
- ☐ Headache
- ☐ Hearing Loss
- ☐ Heat Exhaustion
- ☐ Hernia
- ☐ Infection
- ☐ Irritation to eye
- ☐ Ligament Damage

☐ Multiple (Specify) _____

- ☐ Muscle Spasms
- ☐ Other (Specify) _____

- ☐ Poisoning (Systemic)
- ☐ Puncture
- ☐ Radiation Effects
- ☐ Strain/Sprain
- ☐ Tendonitis
- ☐ Wrist Pain

Part of Body Injured

- ☐ Abdomen
- ☐ Ankle(s)
- ☐ Arms (Multiple)
- ☐ Back
- ☐ Blood
- ☐ Body System
- ☐ Buttocks
- ☐ Chest/Ribs
- ☐ Ear(s)
- ☐ Elbow(s)
- ☐ Eye(s)
- ☐ Face
- ☐ Finger(s)
- ☐ Foot/Feet

- ☐ Hand(s)
- ☐ Head
- ☐ Hip(s)
- ☐ Kidney
- ☐ Knee(s)
- ☐ Leg(s)
- ☐ Liver
- ☐ Lower (arms)
- ☐ Lower (legs)
- ☐ Lung
- ☐ Mind

☐ Multiple (Specify) _____

- ☐ Neck
- ☐ Nervous System
- ☐ Nose
- ☐ Other (Specify) _____

- ☐ Reproductive System
- ☐ Shoulder(s)
- ☐ Throat
- ☐ Toe(s)
- ☐ Upper Arm(s)
- ☐ Upper Leg(s)
- ☐ Wrist(s)

Nature of Injury

- ☐ Absorption
- ☐ Bite/Sting/Scratch
- ☐ Cardio-Vascular/Respiratory System Failure
- ☐ Caught In or Between
- ☐ Fall (From Elevation)
- ☐ Fall (Same Level)
- ☐ Ingestion

- ☐ Inhalation
- ☐ Lifting
- ☐ Mental Stress
- ☐ Motor Vehicle Accident
- ☐ Multiple (Specify) _____

☐ Other (Specify) _____

- ☐ Overexertion
- ☐ Repeated Motion/Pressure
- ☐ Rubbed/Abraded
- ☐ Shock
- ☐ Struck Against
- ☐ Struck By
- ☐ Work Place Violence

Initial Diagnosis/Treatment Date: _____

Type of Treatment

- ☐ Admission to hospital/medical facility
- ☐ Application of bandages
- ☐ Cold/Heat Compression/Multiple Treatment
- ☐ Cold/Heat Compression/One Treatment
- ☐ First Degree Burn Treatment
- ☐ Heat Therapy/Multiple treatment
- ☐ Multiple (Specify) _____

- ☐ Heat Therapy/One Treatment
- ☐ Non-Prescriptive medicine
- ☐ None
- ☐ Observation
- ☐ Other (Specify) _____

☐ Prescription- Multiple dose

- ☐ Prescription- Single dose
- ☐ Removal of foreign bodies
- ☐ Skin Removal
- ☐ Soaking therapy- Multiple Treatment
- ☐ Soaking Therapy- One Treatment
- ☐ Stitches/Sutures
- ☐ Tetanus
- ☐ Treatment for infection
- ☐ Treatment of 2nd /3rd degree burns
- ☐ Use of Antiseptics - multiple treatments
- ☐ Use of Antiseptics - single treatment
- ☐ Whirlpool bath therapy/multiple treatment
- ☐ Whirlpool therapy/single treatment
- ☐ X-rays negative
- ☐ X-rays positive/treatment of fracture

CH2MHILL

Number of days doctor required employee to be off work: _____

Number of days doctor restricted employee's work activity: _____

Equipment Malfunction : Yes ☐ No ☐

Activity was a Routine Task: Yes ☐ No ☐

Describe how you may have prevented this injury: _____

Physician Information

Name: _____

Address: _____

City: _____

Zip Code: _____

Phone: _____

Hospital Information

Name: _____

Address: _____

City: _____

Zip Code: _____

Phone: _____

Property Damage (Complete for Property Damage incidents only)

Property Damaged: _____ Property Owner: _____

Damage Description: _____

Estimated Amount: \$ _____

Spill or Release (Complete for Spill/Release incidents only)

Substance (attach MSDS): _____ Estimated Quantity: _____

Facility Name, Address, Phone No.: _____

Did the spill/release move off the property where work was performed?: _____

Spill/Release From: _____ Spill/Release To: _____

Environmental/Permit Issue (Complete for Environmental/Permit Issue incidents only)

Describe Environmental or Permit Issue: _____

Permit Type: _____

Permitted Level or Criteria (e.g., discharge limit): _____

Permit Name and Number (e.g., NPDES No. ST1234): _____

Substance and Estimated Quantity: _____

Duration of Permit Exceedence: _____

Verbal Notification (Complete for all incident types)(Provide names, dates and times)

CH2M HILL Personnel Notified: _____

Client Notified: _____

Witnesses (Complete for all incident types)

Witness Information (First Witness)

Name: _____

Employee Number (CH2M HILL): _____

Address: _____

City: _____

Zip Code: _____

Phone: _____

Additional Comments:

Witness Information (Second Witness)

Name: _____

Employee Number (CH2M HILL): _____

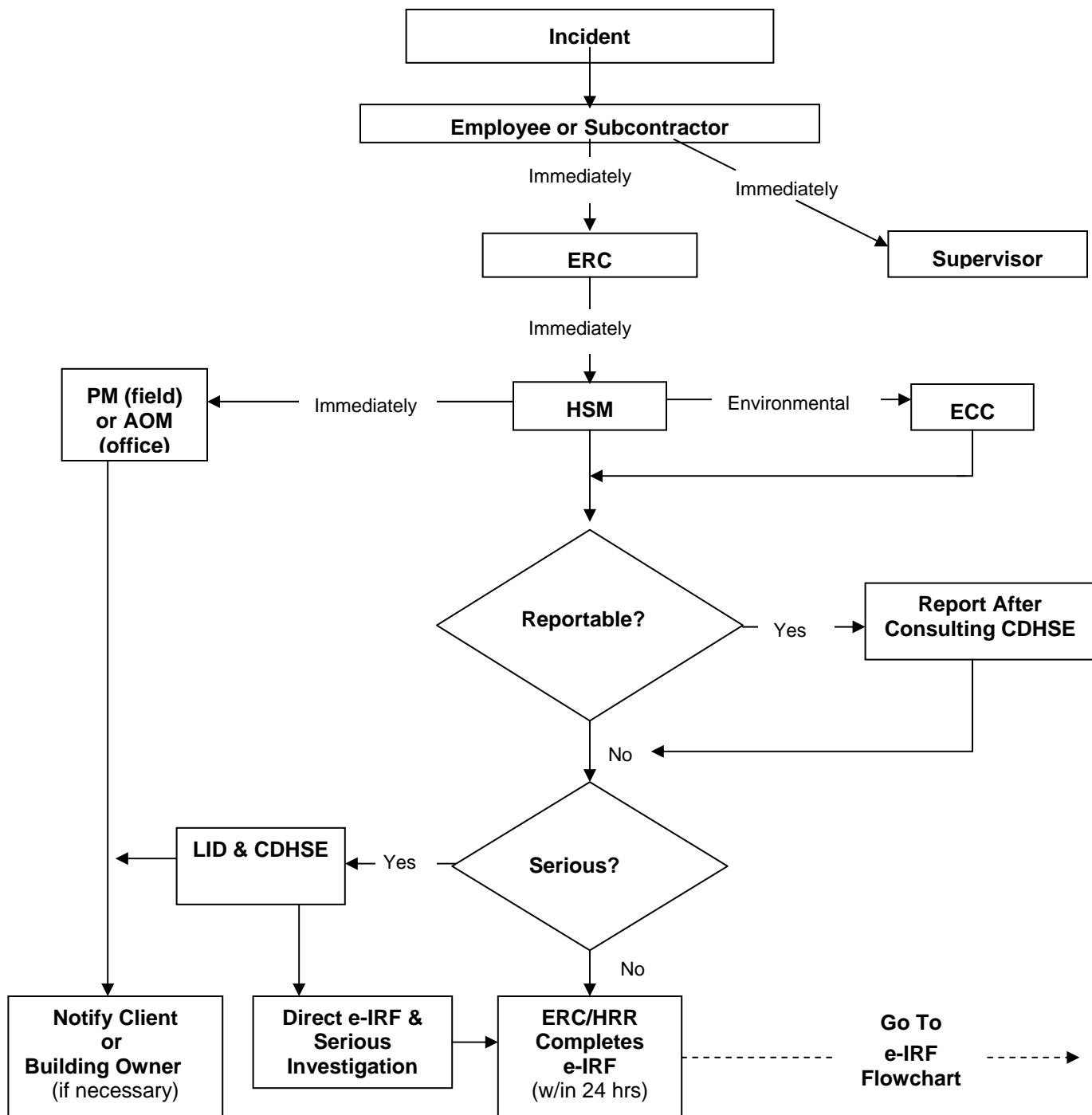
Address: _____

City: _____

Zip Code: _____

Phone : _____

Incident Notification and Reporting Flowchart



CH2MHILL

Incident Reporting and Investigation Standard of Practice HSE-111

Investigation Guidelines

1.0 Introduction

This guideline is provided to assist in accessing, completing, and reviewing an incident investigation. It is important to remember the following when conducting an investigation:

- Gather relevant facts, focusing on fact finding, not fault finding.
- Draw conclusions, pitting facts together into a probable scenario.
- Determine incident root cause(s), which are basic causes on why an unsafe act/condition existed.
- Develop and implement solutions, matching all identified root causes with solutions.

2.0 Documentation

The following should be included in the IRF to document the incident.

Description

- Provide a description of the event and the sequence of events and actions that took place prior to the incident. Start with the incident event and work backwards in time through all of the preceding events that directly contributed to the incident. The information should identify why the event took place as well as who was involved, when and where the event took place, and what actions were taken.

Cause Analysis

Using the form and flowchart in Attachment 11-1, the root cause of the incident will be determined. This form must be retained in the project and/or regional HS&E files.

Immediate Causes – List the substandard actions or conditions that directly affected the incident.

The following are examples of immediate causes:

Substandard Actions: Operating equipment without authority; failure to warn; failure to secure; operating at improper speed; making safety device inoperable; using defective equipment; failing to use PPE; improper loading; improper lifting; improper position for task; under influence of alcohol or drugs; horseplay.

Substandard Conditions: Exposure to hazardous materials; exposure to extreme temperatures; improper lighting; improper ventilation; congestion; exposure to fire and explosive hazard; defective tools, equipment, or materials; exposure to extreme noise; poor ventilation; poor visibility; poor housekeeping.

Basic Causes – List the personal and job factors that caused the incident. The following are examples of basic causes:

Personal Factors: Capability; knowledge; skill; stress; motivation.

Job Factors: Abuse or misuse; engineering; maintenance; purchasing; supervision; tools and equipment; wear and tear; work standards.

Corrective Action Plan

Include all corrective actions taken or those that should be taken to prevent recurrence of the incident. Include the specific actions to be taken, the employer and personnel responsible for implementing the actions, and a time frame for completion. Be sure the corrective actions address the causes. For example, training may prevent recurrence of an incident caused by a lack of knowledge, but it may not help an incident caused by improper motivation.

The following are examples of management programs that may be used to control future incidents. These programs should be considered when determining specific corrective actions.

Management Programs: Accident/incident analysis; emergency preparedness; engineering controls; general promotion; group meetings; health control; hiring and placement; leadership and administration; management training; organizational rules; personal protective equipment; planned inspections; program audits; program controls; purchasing controls; task analysis and procedures; task observation

3.0 Attachments

Attachment 12-1 Root Cause Analysis Form and Flowchart

CH2MHILL

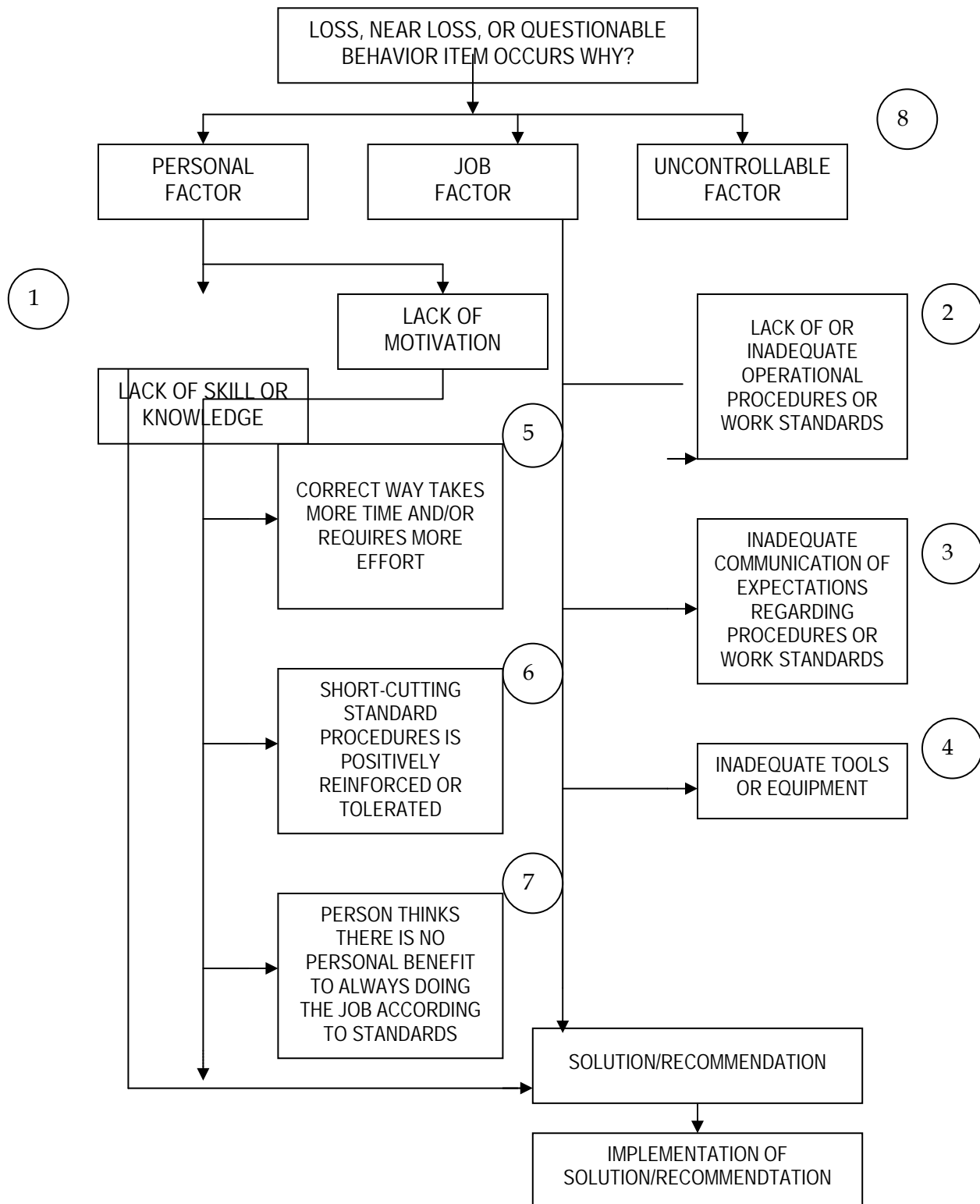
Incident Reporting and Investigation Standard of Practice HSE-111 Attachment 12-1: Investigation Guidelines

Root Cause Analysis Form and Flowchart

Root Cause Analysis Form

Root Cause Analysis (RCA)							
<p>Root Cause Categories (RCC): Select the RCC numbered below that applies for the root cause (RC) and/or contributing factor (CF) in the first column, then describe the specific root cause and corrective actions in each column.</p> <ol style="list-style-type: none">1. Lack of skill or knowledge2. Lack of or inadequate operational procedures or work standards3. Inadequate communication of expectations regarding procedures or work standards4. Inadequate tools or equipment5. Correct way takes more time and/or requires more effort6. Short-cutting standard procedures is positively reinforced or tolerated7. Person thinks there is no personal benefit to always doing the job according to standards							
RCC #	Root Cause(s)	Corrective Actions	RC ¹	CF ²	Due Date	Completion Date	Date Verified
¹ RC = Root Cause; ² CF = Contributing Factors (check which applies)							
Investigation Team Members							
Name		Job Title			Date		
Results of Solution Verification and Validation							
Reviewed By							
Name		Job Title			Date		

Root Cause Analysis Flowchart



Attachment D – Air Monitoring Results

Attachment D
Air Monitoring Data

Date	Monitoring Station FD-1		Monitoring Station FD-2		Comments
	Daily Average Reading (ug/m3)	Daily Maximum Reading (ug/m3)	Daily Average Reading (ug/m3)	Daily Maximum Reading (ug/m3)	
11/11/2008	12.85	29.48	15.00	28.80	Start of Concrete demolition
11/12/2008	20.81	32.23	55.58	104.46	
11/13/2008					Rain - No Data Collected
11/14/2008	42.42	57.79	72.78	95.72	
11/15/2008					Weekend - No Data Collected
11/16/2008					Weekend - No Data Collected
11/17/2008	2.98	6.19	72.78	95.72	Data Collection Error FD-2
11/18/2008	4.66	27.05	72.78	95.72	Data Collection Error FD-2
11/19/2008	4.66	27.05	72.78	95.72	Data Collection Error FD-1 & FD-2
11/20/2008	0.004	0.09	17.73	26.98	
11/21/2008					Rain - No Data Collected
11/22/2008					Weekend - No Data Collected
11/23/2008					Weekend - No Data Collected
11/24/2008	12.33	23.82	24.47	50.23	
11/25/2008	10.24	13.47	17.70	27.06	
11/26/2008					No Data Collected
11/27/2008					Holiday - No Data Collected
11/28/2008					Holiday - No Data Collected
11/29/2008					Weekend - No Data Collected
11/30/2008					Weekend - No Data Collected

12/1/2008					Data Collection Error FD-1 & FD-2
12/2/2008	6.46	9.08	10.58	15.33	
12/3/2008	10.17	15.29	22.88	37.33	
12/4/2008	17.99	21.56	32.92	54.26	
12/5/2008	9.18	15.66	35.50	155.87	
12/6/2008					Weekend - No Data Collected
12/7/2008					Weekend - No Data Collected
12/8/2008					Data Collection Error FD-1 & FD-2
12/9/2008	8.72	15.63	18.49	30.33	
12/10/2008					Rain - No Data Collected

Action level: 0-1,000 ug/m³

Attachment E - Permits

**BALTIMORE CITY
DEPARTMENT OF PUBLIC WORKS
BUREAU OF GENERAL SERVICES
PERMIT**

Permit Number	ROW2008-05430	Permit Date	10/10/2008
Application Number		Start Work Date	11/1/2008
Application Code	Alley	Expiration Date	11/29/2008

Permission is hereby granted, under the terms and condition set forth on the face and back hereof,

Issued To:

Applicant	CLAUDE HITCHCOCK	233 E REDWOOD ST BALTO, MD 21202	PH1 410-576-4053
On-site Contractor	HONEYWELL		

Location	201-213 W. MCCOMAS ST.
Nature of Work	TEMP. BLOCK ALLEY FOR CONSTRUCTION PURPOSES

Applicant shall at all times be responsible for any damage to surface or sub-surface structures or for any accident due to the operation.

The applicant shall, at all times, be responsible for proper delineation of the work site for pedestrians and vehicular traffic, including pre-warning guide signs, flashing lights and barricades in accordance with PART VI of the Manual on Uniform Traffic Control Devices.

Special Conditions

MAY CLOSE ONLY WHILE WORKING. OPEN AT END OF DAY.

Standard Conditions	STD1
	STD8

Parking Meters**Meter ID****Bag Date****Unbag Date**

Fees Paid (To Print Date)	Amount	Account No.	Entered By	Date
Curb Lane - Staging	280.00	C001-786-191-04-000	SMIL	10/28/2008
Total:	\$280.00			

Work Order No**Cash Slip No**

NOTE: CALL 396-6865, 24 HOURS BEFORE A RENEWAL IS DESIRED, OR FOR FURTHER INFORMATION
This permit is revocable at any time by the Bureau Head and must be kept on the premises at all times.
This permit is subject to all the terms and conditions printed on the face and back thereof.

SHEILA DIXON**MAYOR****DAVID E. SCOTT, DIRECTOR****DEPARTMENT OF PUBLIC WORKS****ORIGINAL**

**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28158

THIS WRITTEN INSTRUMENT, WHEN PROPERLY VALIDATED, CONSTITUTES AUTHORITY FOR DOING OR RECEIVING THE THINGS INDICATED BY THE FEES OR CHARGES SHOWN IN THE APPROPRIATE SPACES BELOW. ANY AND ALL THINGS TO BE DONE OR RECEIVED UNDER THIS WRITTEN INSTRUMENT SHALL BE DONE OR RECEIVED IN STRICT COMPLIANCE WITH THE APPLICATION HERETOFORE FILED IN THIS DEPARTMENT FOR THE AUTHORITY CONTAINED HEREIN, INCLUDING ANY AND ALL APPROVED DRAWINGS AND OTHER DATA OR INFORMATION ATTACHED THERETO, AND SUBJECT TO ANY AND ALL LAWS, ORDINANCES, RULES AND REGULATIONS IN EFFECT IN THE CITY OF BALTIMORE AND THE STATE OF MARYLAND. WARNING: IT IS UNLAWFUL TO WORK BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM WITHIN 300 FEET OF A DWELLING.

WARNING: IT IS UNLAWFUL TO CONCEAL ANY WORK UNTIL INSPECTED AND APPROVED BY THIS DEPARTMENT.

WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	012	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 207 MCCOMAS ST

K/A ADDRESS:

OWNER: PATRICIA A BECKMAN

ADDR:

PHONE :

LESSEE:

ADDR:

PHONE :

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800

LIC. NO. : 13298407

ELECTRICAL CONTRACTOR:

PHONE:

LIC. NO. :

PLUMBING CONTRACTOR:

PHONE:

LIC. NO. :

GAS FITTER:

PHONE:

LIC. NO. :

HVAC & R CONTR.:

PHONE:

LIC. NO. :

ARCHITECT:

PHONE:

LIC. NO. :

ENGINEER:

PHONE:

LIC. NO. :

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
-------------------	-------------------	--	-------------------------	--------------------------------

REMOVE EXISTING CONCRETE PATIO REMOVE APPROX THREE INCHES OF SOIL DENEATH PATIO BACKFILL PATIO AREA WITH SOIL TO GRADE AND REPLACE WITH NEW CONCRETE PATIO FILL IN CRACKS IN CONCRETE ON FRONT WITH NEW CONCRETE AS PER CODE

**Property site must be kept clean of trash & debris & maintained secured as per code for the duration of the construction project.
Obtaining a building permit from the City does not constitute approval by or compliance with governing homeowner's association covenants or restrictions.**

A-001-139-260-00-000 PER. INSP.	A-001-131-260-09-000 MISC.	A-001-131-260-09-000 CH. USE	A-001-132-260-01-000 NEW BLDG.	A-001-132-260-02-000 ADDITIONS
A-001-132-260-03-000 ALTERATIONS	A-001-132-260-04-000 REPAIRS	A-001-132-260-05-000 MISC. CONST.	A-001-133-260-00-000 ELECT.	A-001-134-260-01-000 HYDRONIC/STEAM HEAT
A-001-134-260-02-000 DISTRIB/EXH	A-001-134-260-03-000 AIR COND.	A-001-134-260-04-000 DISP. TANKS	A-001-134-260-05-000 FIRE	A-001-134-260-06-000 FUEL-BURNING EQUIPMENT
A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-868-570-01-000 CHAP	A-001-051-150-00-000 TAX
A-001-132-260-06-000 RAZING	A-001-137-260-00-000 FILING FEE	A-001-132-260-02-000 LOW VOLTAGE/TELECOM	A-001-131-260-09-000 PENALTY	TOTAL FEES:
	25.00			52.00

THE AUTHORITY CONTAINED HEREIN MAY NOT BE VALIDLY EXERCISED UNTIL AND AFTER ALL OF THE FEES APPEARING HEREON HAVE BEEN PAID AND EVIDENCE THEREOF APPEARS IN THIS SPACE.



Michael Braverman
**MICHAEL BRAVERMAN
BUILDING OFFICIAL**

PLEASE BE ADVISED THAT THERE IS A PRESUMPTION OF LEAD-BASED PAINT IN PROPERTIES CONSTRUCTED PRIOR TO 1950. PROTECT WORKERS AND TENANTS BY USING THE LEAD-SAFE WORK PRACTICES FOUND IN THE CODE OF MARYLAND REGULATIONS SECTION 26.02.07.

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**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28637

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WARNING: IT IS UNLAWFUL TO CONCEAL ANY WORK UNTIL INSPECTED AND APPROVED BY THIS DEPARTMENT.

WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	011	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 205 MCCOMAS ST

K/A ADDRESS:

OWNER: BARRY GLAZER

ADDR: 1010 LIGHT ST BALTIMORE

LESSEE:

ADDR: PHONE:

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800 LIC. NO.: 13298407

ELECTRICAL CONTRACTOR:

PHONE: LIC. NO.:

PLUMBING CONTRACTOR:

PHONE: LIC. NO.:

GAS FITTER:

PHONE: LIC. NO.:

HVAC & R CONTR.:

PHONE: LIC. NO.:

ARCHITECT:

PHONE: LIC. NO.:

ENGINEER:

PHONE: LIC. NO.:

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
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REMOVE EISTING CONCRETE PATIO REMOVE APPROX THREE INCHES OF SOIL DENEATH PATIO BACKFILL PATIO AREA WITH SOIL TO GRADE AND REPLACE WITH NEW CONCRETE PATIO FILL IN CRACKS IN CONCRETE ON FRONT WITH NEW CONCRETE AS PER CODE

Property site must be kept clean of trash & debris & maintained secured as per code for the duration of the construction project. Obtaining a building permit from the City does not constitute approval by or compliance with governing homeowner's association covenants or restrictions.

A-001-139-260-00-000 PER. INSP.	A-001-131-260-09-000 MISC.	A-001-131-260-09-000 CH. USE	A-001-132-260-01-000 NEW BLDG.	A-001-132-260-02-000 ADDITIONS
A-001-132-260-03-000 ALTERATIONS	A-001-132-260-04-000 REPAIRS	A-001-132-260-05-000 MISC. CONST.	A-001-133-260-00-000 ELECT.	A-001-134-260-01-000 HYDRONIC/STEAM HEAT
A-001-134-260-02-000 DISTRIB/EXH	A-001-134-260-03-000 AIR COND.	A-001-134-260-04-000 DISP. TANKS	A-001-134-260-05-000 FIRE	A-001-134-260-06-000 FUEL-BURNING EQUIPMENT
A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-868-570-01-000 CHAP	A-001-051-150-00-000 TAX
A-001-132-260-08-000 RAZING	A-001-137-260-00-000 FILING FEE	A-001-132-260-02-000 LOW VOLTAGE/TELECOM	A-001-131-260-09-000 PENALTY	TOTAL FEES:
	25.00			52.00

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Michael Braverman
MICHAEL BRAVERMAN
BUILDING OFFICIAL

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**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28644

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WARNING: IT IS UNLAWFUL TO CONCEAL ANY WORK UNTIL INSPECTED AND APPROVED BY THIS DEPARTMENT.

WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	009	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 201 MCCOMAS ST

K/A ADDRESS:

OWNER: WILLIAM FEELEY

ADDR: 1225 FRANCIS AVE

PHONE :

LESSEE:

ADDR:

PHONE :

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800

LIC. NO. : 13298407

ELECTRICAL CONTRACTOR:

PHONE:

LIC. NO. :

PLUMBING CONTRACTOR:

PHONE:

LIC. NO. :

GAS FITTER:

PHONE:

LIC. NO. :

HVAC & R CONTR.:

PHONE:

LIC. NO. :

ARCHITECT:

PHONE:

LIC. NO. :

ENGINEER:

PHONE:

LIC. NO. :

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
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REMOVE EXISTING CONCRETE PATIO REMOVE APPROX THREE INCHES OF SOIL DENEATH PATIO BACKFILL PATIO AREA WITH SOIL TO GRADE AND REPLACE WITH NEW CONCRETE PATIO FILL IN CRACKS IN CONCRETE ON FRONT WITH NEW CONCRETE AS PER CODE

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A-001-132-260-03-000 ALTERATIONS	A-001-132-260-04-000 REPAIRS	A-001-132-260-05-000 MISC. CONST.	A-001-133-260-00-000 ELECT.	A-001-134-260-01-000 HYDRONIC/STEAM HEAT
A-001-134-260-02-000 DISTRIB/EXH	A-001-134-260-03-000 AIR COND.	A-001-134-260-04-000 DISP. TANKS	A-001-134-260-05-000 FIRE	A-001-134-260-06-000 FUEL-BURNING EQUIPMENT
A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-868-570-01-000 CHAP	A-001-051-150-00-000 TAX
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	25.00			52.00

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Michael Braverman
**MICHAEL BRAVERMAN
BUILDING OFFICIAL**

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**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28641

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WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	010	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 203 MCCOMAS ST

K/A ADDRESS:

OWNER: TRACEY COVINGTON

ADDR: SAME

PHONE :

LESSEE:

ADDR:

PHONE :

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800

LIC. NO. : 13298407

ELECTRICAL CONTRACTOR:

PHONE:

LIC. NO. :

PLUMBING CONTRACTOR:

PHONE:

LIC. NO. :

GAS FITTER:

PHONE:

LIC. NO. :

HVAC & R CONTR.:

PHONE:

LIC. NO. :

ARCHITECT:

PHONE:

LIC. NO. :

ENGINEER:

PHONE:

LIC. NO. :

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
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REMOVE EXISTING CONCRETE PATIO REMOVE APPROX THREE INCHES OF SOIL DENEATH PATIO BACKFILL PATIO AREA WITH SOIL TO GRADE AND REPLACE WITH NEW CONCRETE PATIO FILL IN CRACKS IN CONCRETE ON FRONT WITH NEW CONCRETE AS PER CODE

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A-001-132-260-03-000 ALTERATIONS	A-001-132-260-04-000 REPAIRS	A-001-132-260-05-000 MISC. CONST.	A-001-133-260-00-000 ELECT.	A-001-134-260-01-000 HYDRONIC/STEAM HEAT
A-001-134-260-02-000 DISTRIB/EXH	A-001-134-260-03-000 AIR COND.	A-001-134-260-04-000 DISP. TANKS	A-001-134-260-05-000 FIRE	A-001-134-260-06-000 FUEL-BURNING EQUIPMENT
A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-866-570-01-000 CHAP	A-001-051-150-00-000 TAX
A-001-132-260-06-000 RAZING	A-001-137-260-00-000 FILING FEE	A-001-132-260-02-000 LOW VOLTAGE/TELECOM	A-001-131-260-09-000 PENALTY	TOTAL FEES:
	25.00			52.00

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Michael Braverman
MICHAEL BRAVERMAN
BUILDING OFFICIAL

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**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28651

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WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	014	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 211 MCCOMAS ST

K/A ADDRESS:

OWNER: EDWARD WHITE

ADDR: SAME

PHONE :

LESSEE:

ADDR:

PHONE :

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800

LIC. NO. : 13298407

ELECTRICAL CONTRACTOR:

PHONE:

LIC. NO. :

PLUMBING CONTRACTOR:

PHONE:

LIC. NO. :

GAS FITTER:

PHONE:

LIC. NO. :

HVAC & R CONTR.:

PHONE:

LIC. NO. :

ARCHITECT:

PHONE:

LIC. NO. :

ENGINEER:

PHONE:

LIC. NO. :

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
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A-001-132-260-03-000 ALTERATIONS	A-001-132-260-04-000 REPAIRS	A-001-132-260-05-000 MISC. CONST.	A-001-133-260-00-000 ELECT.	A-001-134-260-01-000 HYDRONIC/STEAM HEAT
A-001-134-260-02-000 DISTRIB/EXH	A-001-134-260-03-000 AIR COND.	A-001-134-260-04-000 DISP. TANKS	A-001-134-260-05-000 FIRE	A-001-134-260-06-000 FUEL-BURNING EQUIPMENT
A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-868-570-01-000 CHAP	A-001-051-150-00-000 TAX
A-001-132-260-06-000 RAZING	A-001-137-260-00-000 FILING FEE	A-001-132-260-02-000 LOW VOLTAGE/TELECOM	A-001-131-260-09-000 PENALTY	TOTAL FEES:
	25.00			52.00

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Michael Braverman
MICHAEL BRAVERMAN
BUILDING OFFICIAL

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**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28657

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WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	015	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 213 MCCOMAS ST

K/A ADDRESS:

OWNER: BARRY GLAZER

ADDR: 1010 LIGHT ST BALTIMORE

LESSEE:

ADDR: PHONE :

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800 LIC. NO. : 13298407

ELECTRICAL CONTRACTOR:

PHONE: LIC. NO. :

PLUMBING CONTRACTOR:

PHONE: LIC. NO. :

GAS FITTER:

PHONE: LIC. NO. :

HVAC & R CONTR.:

PHONE: LIC. NO. :

ARCHITECT:

PHONE: LIC. NO. :

ENGINEER:

PHONE: LIC. NO. :

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
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A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-868-570-01-000 CHAP	A-001-051-150-00-000 TAX
A-001-132-260-06-000 RAZING	A-001-137-260-00-000 FILING FEE	A-001-132-260-02-000 LOW VOLTAGE/TELECOM	A-001-131-260-09-000 PENALTY	TOTAL FEES:
	25.00			52.00

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Michael Braverman
MICHAEL BRAVERMAN
BUILDING OFFICIAL

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**Department Of Housing And Community Development
Division Of Construction And Building Inspection**

Permit No.: COM2008-28653

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WARNING: IT IS UNLAWFUL TO CONCEAL ANY WORK UNTIL INSPECTED AND APPROVED BY THIS DEPARTMENT.

WARD	SEC.	BLOCK	LOT	ISSUE DATE	EXP. DATE	DISTRICT	MINOR PRIVILEGE	DRAWINGS ATTACHED	PLANS NO.
23	10	1050	013	10/23/08	4/23/09	901		No	

PROPERTY ADDRESS: 209 MCCOMAS ST

K/A ADDRESS:

OWNER: JOSEPH R BROWN

ADDR: SAME

PHONE :

LESSEE:

ADDR:

PHONE :

PRIME CONTR: ATC GROUP SERVICES INC

PHONE: 609-386-8800

LIC. NO. : 13298407

ELECTRICAL CONTRACTOR:

PHONE:

LIC. NO. :

PLUMBING CONTRACTOR:

PHONE:

LIC. NO. :

GAS FITTER:

PHONE:

LIC. NO. :

HVAC & R CONTR.:

PHONE:

LIC. NO. :

ARCHITECT:

PHONE:

LIC. NO. :

ENGINEER:

PHONE:

LIC. NO. :

WORK COST:	\$7,100.00	LAND USE CODES: 1113 0000 0000 0000	UNDERPINNING: NO	INTERIOR DEMOLITION: NO
-------------------	-------------------	--	-------------------------	--------------------------------

REMOVE EXISTING CONCRETE PATIO REMOVE APPROX THREE INCHES OF SOIL DENEATH PATIO BACKFILL PATIO AREA WITH SOIL TO GRADE AND REPLACE WITH NEW CONCRETE PATIO FILL IN CRACKS IN CONCRETE ON FRONT WITH NEW CONCRETE AS PER CODE

**Property site must be kept clean of trash & debris & maintained secured as per code for the duration of the construction project.
Obtaining a building permit from the City does not constitute approval by or compliance with governing homeowner's association covenants or restrictions.**

A-001-139-260-00-000 PER. INSP.	A-001-131-260-09-000 MISC.	A-001-131-260-09-000 CH. USE	A-001-132-260-01-000 NEW BLDG.	A-001-132-260-02-000 ADDITIONS
A-001-132-260-03-000 ALTERATIONS	A-001-132-260-04-000 REPAIRS	A-001-132-260-05-000 MISC. CONST.	A-001-132-260-00-000 ELECT.	A-001-134-260-01-000 HYDRONIC/STEAM HEAT
A-001-134-260-02-000 DISTRIB/EXH	A-001-134-260-03-000 AIR COND.	A-001-134-260-04-000 DISP. TANKS	A-001-134-260-05-000 FIRE	A-001-134-260-06-000 FUEL-BURNING EQUIPMENT
A-001-136-260-00-000 ELEVATOR	A-001-135-260-00-000 PLUMBING	A-001-132-260-07-000 S & E CONTROL	A-001-868-570-01-000 CHAP	A-001-051-150-00-000 TAX
A-001-132-260-06-000 RAZING	A-001-137-260-00-000 FILING FEE	A-001-132-260-02-000 LOW VOLTAGE/TELECOM	A-001-131-260-09-000 PENALTY	TOTAL FEES:
	25.00			52.00
		0.00		
		25.00		

THE AUTHORITY CONTAINED HEREIN MAY NOT BE VALIDLY EXERCISED UNTIL AND AFTER ALL OF THE FEES APPEARING HEREON HAVE BEEN PAID AND EVIDENCE THEREOF APPEARS IN THIS SPACE.



Michael Braverman
MICHAEL BRAVERMAN
BUILDING OFFICIAL

PLEASE BE ADVISED THAT THERE IS A PRESUMPTION OF LEAD-BASED PAINT IN PROPERTIES CONSTRUCTED PRIOR TO 1950. PROTECT WORKERS AND TENANTS BY USING THE LEAD-SAFE WORK PRACTICES FOUND IN THE CODE OF MARYLAND REGULATIONS SECTION 26.02.07.

THE AUTHORITY CONTAINED HEREIN DOES NOT AUTHORIZE THE PERFORMANCE OF ANY WORK IN, ON, UNDER OR OVER ANY STREET, HIGHWAY, ALLEY, SIDEWALK OR ANY OTHER PUBLIC WAY, UNLESS PERMISSION TO DO SO HAS BEEN FIRST SECURED FROM THE PROPER AUTHORITY.

Attachment F – Public Notices

McComas Street – Rear Patio Replacement 201-213 McComas Street

The work will be performed in the following steps:

1. We will meet with each property owner/tenant and describe the work details. Let us know which items from your back yard you want to keep. We will identify them on a property survey form and store them in a locked storage container. These items will be returned to you when the work is complete.
2. We will remove all trash, bushes, vines, plants, and fences from all seven yards at the same time. It may take several days to clear all seven properties.
3. We will then cover any crawl spaces, openings, and windows in the back of each house to prevent dust, debris, and rain water from getting inside the house while we are working. We will cover the openings and windows of all seven properties before we begin construction activities. This work may take one-two days to complete.
4. We will place all trash and unwanted items in a dumpster located in the rear alley of McComas Street. Homeowners/tenants also may use this dumpster. The dumpster cannot be used for hazardous materials like paints or chemicals.
5. We will remove the existing concrete patio and at least three inches of soil and take it to an approved disposal facility. This work will also be conducted at each of the seven houses at the same time. This work will take approximately two-three weeks to complete.
6. The concrete and soil removed from your yard will not be left on the patio or alley way overnight.
7. Clean soil will be placed in the back yards of all seven properties to the same level as the removed patio. A new concrete patio will be constructed. New fencing will also be installed.

❖ You will not be able to access your back yard while work is being performed.

❖ We will keep you informed about the status of the work and the date of completion.

❖ Work will be done from 8:00 a.m. – 5:00 p.m.

We will let you know if additional work hours are needed.

❖ We will take measures to control dust including spraying a fine mist of water over the construction area during dust-generating activities.

❖ We also will collect air samples when we are removing concrete and soil. If high dust levels are measured we will stop work to control dust before restarting the work.

Please contact Sibyl Dinkins at:

213 McComas St. or 410-869-2811

McComas Street – Patio Renovation Update October 24, 2008

Today Orkin has placed Protecta rodent bait stations in the following areas:

- 8 stations in the rear alley;
- 3 stations on Race Street near McComas Street; and
- and 1 station next to 213 McComas Street.

The casings of the Protecta rodent bait stations are constructed of a plastic material with a small opening to prevent access by animals except rodents. The pesticide bait to be placed within the stations may be harmful to children and pets if ingested. Please avoid any contact with the stations. The stations are locked and can not be opened without a key. Honeywell's contractors will be responsible for removing the stations when the construction work is completed.

If a rodent bait station is found opened or tampered with, or if you have any questions or concerns, please contact Sibyl Dinkins at 410-869-2811. In the unlikely event that contact is made with the chemical inside the bait station, please contact the Orkin Customer Care Hotline at 866-847-0013.

Below is a picture of the Protecta rodent bait station.



McComas Street – Patio Renovation Update November 19, 2008

We can dispose of large items of trash until Friday November 21st.

After this Friday, November 21st, we can only dispose of household trash in garbage cans that is usually removed by the City of Baltimore. We have received many large items of household trash such as mattresses, furniture, and household appliances. We have now reached the capacity of our dumpster. I will let you know if we are able to accept additional large items of trash in the future.

If you have any questions or concerns, please contact Sibyl Dinkins at 410-869-2811.

Attachment G – Waste Characterization Data

ANALYTICAL RESULTS

Prepared for:

Honeywell International, Inc.
101 Columbia Road
MEY-3
Morristown NJ 07962

973-455-4131

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1124815. Samples arrived at the laboratory on Monday, December 15, 2008. The PO# for this group is 5065556.

Client Description

35113-112008-01 Composite Soil Sample
35113-112008-02 Composite Soil Sample

Lancaster Labs Number

5558720
5558721

ELECTRONIC COPY TO	CH2M Hill, Inc.	Attn: Charles Wilder
ELECTRONIC COPY TO	Honeywell International	Attn: Ken Biles
ELECTRONIC COPY TO	CH2M Hill	Attn: Chemistry Team

Questions? Contact your Client Services Representative
Wendy A Kozma at (717) 656-2300

Respectfully Submitted,



Max E. Snively
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. TL5558720

Group No. 1124815

35113-112008-01 Composite Soil Sample

COC# 35113-112008-01

McComas St Project

Collected: 11/20/2008 16:15

by KB

Account Number: 10651

Submitted: 12/15/2008 17:00

Reported: 12/23/2008 at 11:30

Discard: 01/07/2009

Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
00259	Mercury	7439-97-6	0.000056 U		0.000056	mg/l	1
07035	Arsenic	7440-38-2	0.134		0.0100	mg/l	1
07036	Selenium	7782-49-2	0.0107 U		0.0107	mg/l	1
07046	Barium	7440-39-3	0.399		0.00060	mg/l	1
07049	Cadmium	7440-43-9	0.0061		0.0020	mg/l	1
07051	Chromium	7440-47-3	0.0033 J		0.0030	mg/l	1
07055	Lead	7439-92-1	0.0719		0.0069	mg/l	1
07066	Silver	7440-22-4	0.0022 U		0.0022	mg/l	1

This sample was originally submitted to the laboratory on 11/21/08 at 16:00. We received authorization for further testing on 12/8/08.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
00259	Mercury	SW-846 7470A	1	12/18/2008 18:07	Nelli S Markaryan	1
07035	Arsenic	SW-846 6010B	1	12/19/2008 19:00	Thomas F McLamb Sr	1
07036	Selenium	SW-846 6010B	2	12/23/2008 05:44	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	12/19/2008 19:00	Thomas F McLamb Sr	1
07049	Cadmium	SW-846 6010B	1	12/19/2008 19:00	Thomas F McLamb Sr	1
07051	Chromium	SW-846 6010B	1	12/19/2008 19:00	Thomas F McLamb Sr	1
07055	Lead	SW-846 6010B	1	12/19/2008 19:00	Thomas F McLamb Sr	1
07066	Silver	SW-846 6010B	1	12/19/2008 19:00	Thomas F McLamb Sr	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	12/16/2008 11:30	Roza S Goslawska	n.a.
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	12/17/2008 14:00	James L Mertz	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	2	12/22/2008 15:54	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	12/17/2008 20:50	Nelli S Markaryan	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. TL5558721

Group No. 1124815

35113-112008-02 Composite Soil Sample

COC# 35113-112008-01

McComas St Project

Collected: 11/20/2008 16:30

by KB

Account Number: 10651

Submitted: 12/15/2008 17:00

Reported: 12/23/2008 at 11:30

Discard: 01/07/2009

Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
00259	Mercury	7439-97-6	0.000056 U		0.000056	mg/l	1
07035	Arsenic	7440-38-2	0.0233		0.0100	mg/l	1
07036	Selenium	7782-49-2	0.0107 U		0.0107	mg/l	1
07046	Barium	7440-39-3	0.289		0.00060	mg/l	1
07049	Cadmium	7440-43-9	0.0020 U		0.0020	mg/l	1
07051	Chromium	7440-47-3	0.0249		0.0030	mg/l	1
07055	Lead	7439-92-1	0.0069 U		0.0069	mg/l	1
07066	Silver	7440-22-4	0.0022 U		0.0022	mg/l	1

This sample was originally submitted to the laboratory on 11/21/08 at 16:00. We received authorization for further testing on 12/8/08.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
00259	Mercury	SW-846 7470A	1	12/18/2008 18:17	Nelli S Markaryan	1
07035	Arsenic	SW-846 6010B	1	12/19/2008 19:03	Thomas F McLamb Sr	1
07036	Selenium	SW-846 6010B	1	12/23/2008 05:54	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	12/19/2008 19:03	Thomas F McLamb Sr	1
07049	Cadmium	SW-846 6010B	1	12/19/2008 19:03	Thomas F McLamb Sr	1
07051	Chromium	SW-846 6010B	1	12/19/2008 19:03	Thomas F McLamb Sr	1
07055	Lead	SW-846 6010B	1	12/19/2008 19:03	Thomas F McLamb Sr	1
07066	Silver	SW-846 6010B	1	12/19/2008 19:03	Thomas F McLamb Sr	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	12/16/2008 11:30	Roza S Goslawska	n.a.
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	12/17/2008 14:00	James L Mertz	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	2	12/22/2008 15:54	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	12/17/2008 20:50	Nelli S Markaryan	1

Quality Control Summary

Client Name: Honeywell International, Inc.

Group Number: 1124815

Reported: 12/23/08 at 11:30 AM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 083525705001	Sample number(s): 5558720-5558721							
Arsenic	0.0100 U	0.0100	mg/l	110		90-119		
Barium	0.00096	0.00060	mg/l	94		90-110		
	J							
Cadmium	0.0020 U	0.0020	mg/l	98		90-112		
Chromium	0.0030 U	0.0030	mg/l	98		90-110		
Lead	0.0069 U	0.0069	mg/l	103		90-113		
Silver	0.0022 U	0.0022	mg/l	102		90-118		
Batch number: 083525713001	Sample number(s): 5558720-5558721							
Mercury	0.000056	0.00005	mg/l	105		80-120		
	U	6						
Batch number: 083575705001	Sample number(s): 5558720-5558721							
Selenium	0.0107 U	0.0107	mg/l	104		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 083525705001	Sample number(s): 5558720-5558721 UNSPK: P558374 BKG: P558374								
Arsenic	102	113	75-125	8	20	0.0393	0.0364	8 (1)	20
Barium	95	96	78-118	2	20	0.0043 J	0.0046 J	7 (1)	20
Cadmium	95	95	83-116	1	20	0.0020 U	0.0020 U	0 (1)	20
Chromium	94	95	81-120	0	20	0.0312	0.0308	1 (1)	20
Lead	98	100	75-125	2	20	0.0151	0.0168	10 (1)	20
Silver	99	99	75-125	1	20	0.0022 U	0.0022 U	0 (1)	20
Batch number: 083525713001	Sample number(s): 5558720-5558721 UNSPK: 5558720 BKG: 5558720								
Mercury	110	107	80-120	3	20	0.000056 U	0.000056 U	0 (1)	20
Batch number: 083575705001	Sample number(s): 5558720-5558721 UNSPK: P553913 BKG: P553913								
Selenium	101	102	75-125	1	20	0.0409	0.0424	3 (1)	20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

1124815 5558720-21
 aoot 10651 ghp 112431 #5537649-50

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425 (717) 856-2300			Honeywell Chain Of Custody / Analysis Request										AESI Ref: 39773.41501 COC#: 35113-112008-01	
Privileged & Confidential			N		Site Name: SWANN PARK			Phase: Sampling Program			Lab Proj # (SDG):			
Sampling Co.: CH2MHILL			EDD To: Locus Focus		Location of Site: Baltimore, MD			Lab ID: LLT			Site ID: R35113			
Client Contact: (name, co., address) Honeywell 101 Columbia Road Morristown, NJ 08962 Preliminary Data To: circles.williams@honeywell.com			Sampler: Kenneth Biles PO #: 5065556		Analysis Turnaround Time (TAT): 7 Consultant: CH2M			Laboratory Contact: Wendy Kozma			Report Tier Level: Standard			
Sample Receipt Acknowledgement To: Hard Copy To: 1000 Wills Street, Baltimore, MD 21231 Invoice To: Chris French 101 Columbia Road Morristown, NJ 08962			Full Report TAT: 28		Composite/Grab Field Filtered Sample ? Metals-8 RCRA 1311/6010/7000			Authorized User: Honeywell			Test & Excel File Direct: User & Test File: Green			
Sample Identification			Sample Date Sample Time Sample Type Sample Matrix Sample Purpose # of Cont.		Units ug/kg			Sampling Method (code)			Lab Sample Numbers			
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Units	ug/kg	Sampling Method (code)	Lab Sample Numbers	
1	MC-IDW		35113-112008-01	11/20/2008	16:15	SOIL	WASTE	REG	1	comp	N	X		
2	MC-IDW		35113-112008-02	11/20/2008	16:30	BLKSOLID	WASTE	REG	1	comp	N	X		
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

TCEP metals per client work 12/16/08

Relinquished by: <i>[Signature]</i>	Company: <i>CH2M</i>	Received by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Condition: <i>[Signature]</i>	Custody Seals Intact: <i>[Signature]</i>
Date/Time: 11/21/08 13:00		Date/Time: 11/21/08 13:00		Cooler Temp.: <i>[Signature]</i>	
Relinquished by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Condition: <i>[Signature]</i>	Custody Seals Intact: <i>[Signature]</i>
Date/Time: 11/21/08 16:00		Date/Time: 11/21/08 16:00		Cooler Temp.: <i>[Signature]</i>	

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 [pH<2], 4 Deg C); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 [pH<2], 40 Deg C); 11 (4C NaOH [pH>12] & Ascorbic Acid); 12 (4C H2SO4 [pH<2] & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

9.279.5

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Attachment H – Off-site Disposal Documentation



Modern Landfill

4400 Mt. Pisgah Road
York, PA 17402-8240
Phone: 717-246-2686
Fax: 717-244-5588

January 27, 2008

Sourcing Leader/Environmental Services
Honeywell International
Specialty Materials
101 Columbia Road
Morristown, NJ 07960

Attention: Barbara Azzarello

Re: Concrete and Soil Waste Disposal
2000 Race Street
Baltimore, Maryland

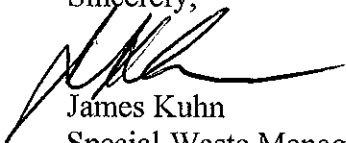
Dear Ms. Azzarello:

Please accept this letter as confirmation that Modern Landfill may accept for disposal approximately 450 tons one time of concrete and soil from your project located at 2000 Race Street, Baltimore, Maryland. The waste approval number for this waste is 90116J1.

This material will be disposed at a rate of [REDACTED] ton under the terms and conditions of the Disposal and Recycling Agreement executed June 25, 2008.

Thank you for your interest in Modern Landfill and should you have any questions or concerns regarding this matter, please feel free to contact me at 717-246-2686.

Sincerely,



James Kuhn
Special Waste Manager



McComas Roll-Off Volumes tons			
2/4/2009	7:34	14.18	Concrete
2/4/2009	12:20	13.93	Concrete
2/5/2009	7:22	12.85	Concrete
Sub-Total Concrete		40.96	
2/2/2009	7:09	17.97	Soil
2/2/2009	11:36	12.56	Soil
2/3/2009	7:17	11.4	Soil
2/3/2009	12:21	14.17	Soil
2/5/2009	11:16	16.41	Soil
2/6/2009	11:17	11.47	Soil
Sub-Total Soil		83.98 tons	

FROM :

FAX NO. :

Feb. 10 2009 09:33PM P1

Soil

Modern Landfill

4400 Mt. Pleasant Rd.
York, PA 17108
(717) 246-2886
Fax (717) 244-5588



Ticket: 278087
Date: 2/2/2009
Time In: 07:09:02
Time Out: 07:45:31

***** Reprinted Ticket *****

Customer: 1000 **Customer Copy** HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-

Generator: A1209/HONEYWELL INTERNATIONAL Profile: 90116J1

PO:
Gross: 70540 lb In Scale 1
Tare: 34600 lb Out Scale 1
Net: 35940 lb
Net Tons: 17.97 Cuyds: 20.00
Haul Cust:

Truck: 660217
Trailer: Manifest: 57809
Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	17.97	Tons

Driver: _____

Weighmaster: MYRTLE RICE 061389

FROM :

FAX NO. :

Feb. 10 2009 09:33PM P2

Modern Landfill

Soil

Ticket: 278218

Date: 2/2/2009

Time In: 11:36:47

Time Out: 11:56:07

4400 Mt. Pleasant Rd.
York, PA 17406
(717) 248-2888
Fax (717) 244-5588



***** Reprinted Ticket *****

Customer: 100077 HONEYWELL INTERNATIONAL

101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-

Generator: A1209/HONEYWELL INTERNATIONAL

Profile: 90116J1

PO:

Gross: 59840 lb In Scale 1

Tare: 34720 lb Out Scale 1

Net: 25120 lb

Net Tons: 12.56 Cuyds: 30.00

Haul Cust:

Truck: 660217

Trailer:

Manifest: 40592

Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	12.56	Tons

Driver: _____

Weighmaster:

TERRY SHERBINE 062688

FROM :

FAX NO. :

Feb. 10 2009 09:33PM P3

Modern Landfill

4400 Mt. Pleasant Rd.
York, PA 17406
(717) 246-2888
Fax (717) 244-5588



Soil
Ticket: 278519
Date: 2/3/2009
Time In: 12:21:43
Time Out: 12:49:30

***** Reprinted Ticket *****

Customer Copy
Customer: 100077 HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-
Generator: A1209 HONEYWELL INTERNATIONAL

Profile: 90116J1

PO:
Gross: 62360 lb In Scale 1
Tare: 34020 lb Out Scale 1
Net: 28340 lb
Net Tons: 14.17 Cuyds: 30.00
Haul Cust:

Truck: 660213

Trailer:

Manifest: 40593

Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	14.17	Tons

Driver: _____

Weighmaster:

TERRY SHERBINE 062688

FROM :

FAX NO. :

Feb. 10 2009 09:33PM P4

Modern Landfill

4400 Mt. Pleasant Rd.
York, PA 17105
(717) 248-2886
Fax (717) 244-5588



Soil
Ticket: 278371
Date: 2/3/2009
Time In: 07:17:53
Time Out: 07:45:21

***** Reprinted Ticket *****

Customer Copy
Customer: 1000 HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-
Generator: A1209/HONEYWELL INTERNATIONAL

Profile: 90116J1

PO:
Gross: 57620 lb In Scale 1
Tare: 34820 lb Out Scale 1
Net: 22800 lb
Net Tons: 11.40 Cuyds: 30.00
Haul Cust:

Truck: 660217

Manifest: 40594

Trailer:
Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	11.40	Tons

Driver: _____

Weighmaster:

TERRY SHERBINE 062688

FROM :

FAX NO. :

Feb. 10 2009 09:34PM P5

Modern Landfill

CONCRETE

4400 Mt. Pleasant Rd.
York, PA 17406
(717) 244-2808
Fax (717) 244-5588



Scalehouse Copy

Ticket: 278740
Date: 2/4/2009
Time In: 11:51:36
Time Out: 12:20:52

***** Reprinted Ticket *****

Customer: 1000777/HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-

Generator: A1209/HONEYWELL INTERNATIONAL Profile: 90116J1

Truck: 660209

Trailer:

Manifest: 40596

Comment:

PQ:
Gross: 61020 lb In Scale 1
Tare: 33160 lb Out Scale 1
Net: 27860 lb
Net Tons: 13.93 Cuyds: 20.00
Haul Cust:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	13.93	Tons

Driver: _____

Weighmaster:

JODI WILLIAMS - 059039

FROM :

FAX NO. :

Feb. 10 2009 09:34PM P6

Modern Landfill

CONCRETE

4400 Mt. Pisgah Rd.
York, PA 17408
(717) 246-2688
Fax (717) 244-8588



Ticket: 278635
Date: 2/4/2009
Time In: 07:34:54
Time Out: 07:59:55

***** Reprinted Ticket *****

Customer: 1000 **Customer Copy** HONEYWELL INTERNATIONAL

101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-

Generator: A1209/HONEYWELL INTERNATIONAL Profile: 90116J1

PO:
Gross: 62140 lb In Scale 1
Tare: 33780 lb Out Scale 1
Net: 28360 lb
Net Tons: 14.18 Cuyds: 20.00
Haul Cust:

Truck: 660209

Trailer:

Manifest: 40595

Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	14.18	Tons

Driver: _____

Weighmaster: _____

MYRTLE RICE 061389

FROM :

FAX NO. :

Feb. 10 2009 09:34PM P7

Modern Landfill

4400 Mt. Pleasant Rd.
York, PA 17408
(717) 246-2888
Fax (717) 244-5588



Concrete

Ticket: 278853
Date: 2/5/2009
Time In: 06:56:35
Time Out: 07:22:44

***** Reprinted Ticket *****

Customer: 1000777 HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-

Generator: A1209/HONEYWELL INTERNATIONAL Profile: 90116J1

PO:
Gross: 59260 lb In Scale 1
Tare: 33560 lb Out Scale 1
Net: 25700 lb
Net Tons: 12.85 Cuyds: 20.00
Haul Cust:

Truck: 660217

Trailer:

Manifest: 40597

Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	12.85	Tons

Driver: _____

Weighmaster:

MYRTLE RICE 061389

FROM :

FAX NO. :

Feb. 10 2009 09:34PM PB

Modern Landfill

Soil

4400 Mt. Pleasant Rd.
York, PA 17408
(717) 246-2686
Fax (717) 244-5588



Ticket: 278972
Date: 2/5/2009
Time In: 11:16:06
Time Out: 11:49:24

***** Reprinted Ticket *****

Customer Copy
Customer: 1000777/HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-
Generator: A1209/HONEYWELL INTERNATIONAL

Profile: 90116J1

PO:
Gross: 66580 lb It Scale 1
Tare: 33760 lb Cut Scale 1
Net: 32820 lb
Net Tons: 16.41 Cuyds: 20.00
Haul Cust:

Truck: 660217

Trailer:

Manifest: 40598

Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	16.41	Tons
13/NEW JERSEY STATE(NJ)	0908/Digout - Rolloff & Sm Trk	1.00	Units

Driver: _____

Weighmaster:

TERRY SHERBINE 062688

FROM :

FAX NO. :

Feb. 10 2009 09:34PM P9

Modern Landfill

4400 Mt. Pleasant Rd.
York, PA 17406
(717) 248-2888
Fax (717) 244-5588



Soil.
Ticket: 279205
Date: 2/6/2009
Time In: 10:52:16
Time Out: 11:17:01

***** Reprinted Ticket *****

Customer Copy
Customer: 1000777/HONEYWELL INTERNATIONAL
101 COLUMBIA ROAD
MORRISTOWN, NJ 07960-

Generator: A1209/HONEYWELL INTERNATIONAL Profile: 90116J1

PO:
Gross: 56660 lb In Scale 1
Tare: 33720 lb Out Scale 1
Net: 22940 lb
Net Tons: 11.47 Cuyds: 30.00
Haul Cust:

Truck: 660217

Trailer:

Manifest: 40599

Comment:

Origin	Materials & Services	Quantity	Unit
13/NEW JERSEY STATE(NJ)	100% of 0122/Contaminated Soil	11.47	Tons

Driver: _____

Weighmaster:

JODI WILLIAMS - 059039

Attachment I – Certified Clean Crusher Run Documentation



October 14, 2008

ATC Associates
Attn: Diana

Gentlemen:

This is to certify that the MD SHA CR-6 dolomitic marble Crusher Run, as produced at our Texas, Maryland Quarry, meets the specifications of the 2001 Maryland State Highway Administration, Section 901.01 and ASTM 2001 Book of Standards, volume 04.03 D2940-98 Graded Aggregate Material for Bases and Subbases for Highways or Airports. This material also meets the Baltimore County 2000 Specification for Crusher Run Aggregate Table 901A test method T 27 and the City of Baltimore requirements for this type material.

This material is free of hazardous contaminants and is a naturally occurring product of nature containing crushed dolomitic marble.

MD SHA-CR-6 CRUSHER RUN / ASTM D2940 GASB

SIEVE SIZE	AVERAGE GRADATION	MD SHA Specs.	ASTM Design Range	Baltimore City
2"	100.0	100	100	
1 1/2"	100.0	90-100	90-100	100
1"	92.0			
3/4"	82.0	60-90		
1/2"	68.0			
3/8"	61.0			
3/16"	53.0*			
#4	49.0	30-60	30-60	25-55
#8	43.0			
#10	40.0*			15-45
#16	38.0			
#30	32.0			
#40	26.0*			
#50	22.0			
#100	14.0			
#200(wet)	8.5	0-15	0-12	0-12

*Estimated from Mineral Aggregate Gradation Curve

Maximum Dry Density

(ASTM D1557 Method A) - 144.6 pcf
2.00 ton/cy

Optimum Moisture Content - 3.5%

Sodium Sulfate Soundness - 2.6% loss (AASHTO T104)

Liquid Limit - 19 (AASHTO T89)


Plasticity Index - Non-Plastic (AASHTO T90)

Absorption (1 1/2"-#4) - 0.5%



This material complies with other specifications as set forth in the ASTM and Maryland State Highway Administration requirements, regarding deleterious substances, abrasion and soundness.

Sincerely,
LAFARGE

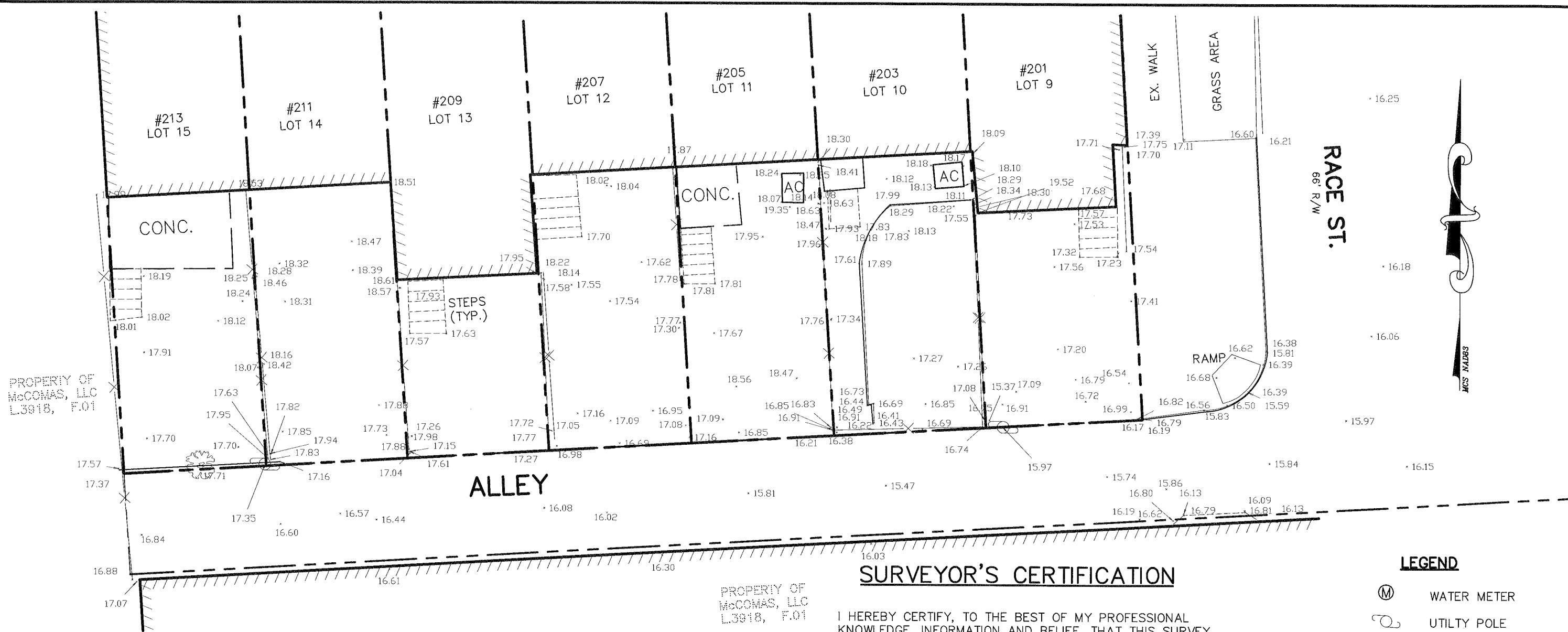

Lynn McGarity

Manager, Quality Control Aggregates

TXCR-6.108

LM: lm

Attachment J – Topographic Survey Drawings



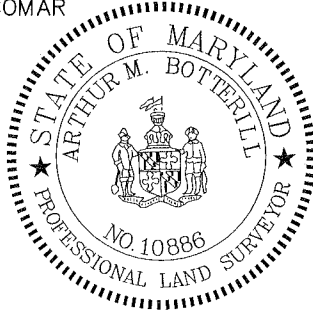
GENERAL NOTES

1. THE BEARINGS SHOWN ON THIS SURVEY ARE IN THE MARYLAND COORDINATE SYSTEM NAD 83/91. THE VERTICAL DATUM IS NAVD 88.
2. THIS FIELD RUN TOPOGRAPHIC SURVEY WAS PERFORMED BY PATTON HARRIS RUST AND ASSOCIATES ON OR ABOUT NOVEMBER 7, 2008.

SURVEYOR'S CERTIFICATION

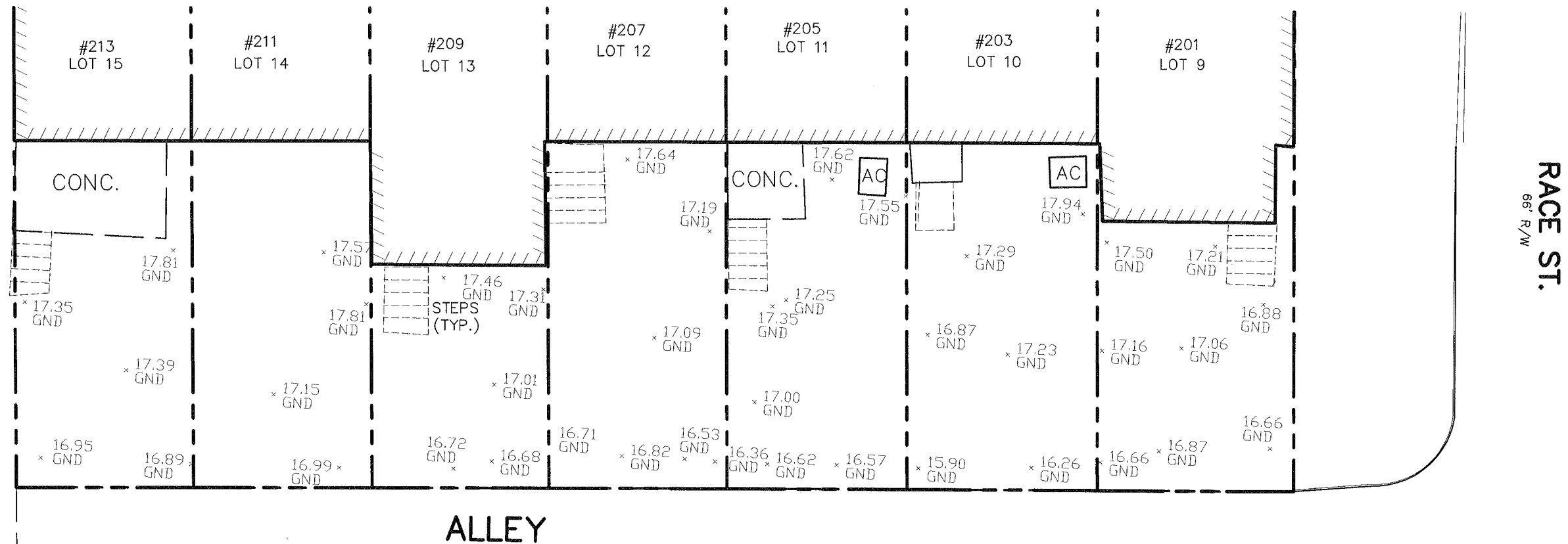
I HEREBY CERTIFY, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS SURVEY IS BASED UPON AVAILABLE LAND RECORDS, AS REFERENCED HEREON, AND WAS PREPARED IN ACCORDANCE WITH THE MARYLAND MINIMUM STANDARDS OF PRACTICE FOR TOPOGRAPHIC SURVEYS (COMAR 09.13.06.04).

Arthur M. Botterill 01/19/09
 ARTHUR M. BOTTERILL
 PROFESSIONAL LAND SURVEYOR
 MD REGISTRATION No. 10886



LEGEND

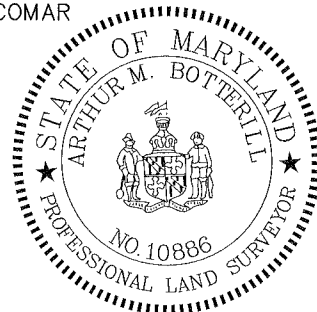
- Ⓜ WATER METER
- Ⓢ UTILITY POLE
- ×-×-× FENCE LINE
- ⓐ A/C UNIT



SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS SURVEY IS BASED UPON AVAILABLE LAND RECORDS, AS REFERENCED HEREON, AND WAS PREPARED IN ACCORDANCE WITH THE MARYLAND MINIMUM STANDARDS OF PRACTICE FOR TOPOGRAPHIC SURVEYS (COMAR 09.13.06.04).

Arthur M. Botterill 01/19/09
 ARTHUR M. BOTTERILL
 PROFESSIONAL LAND SURVEYOR
 MD REGISTRATION No. 10886

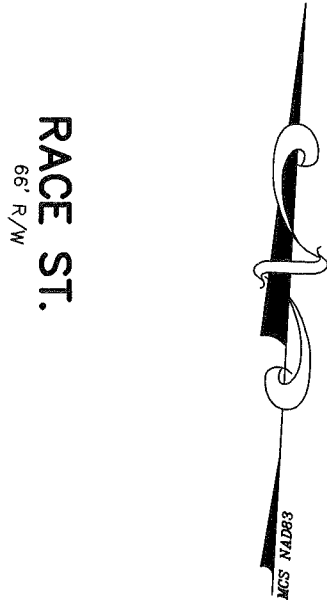
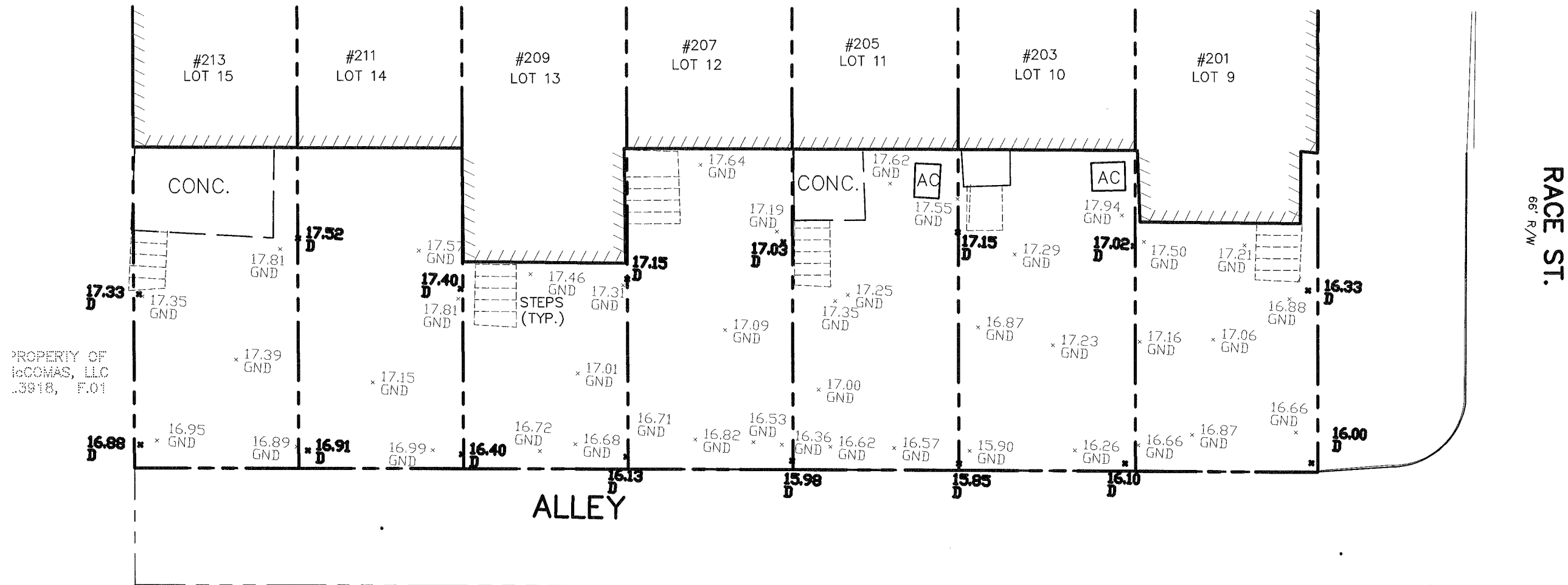


PROPERTY OF
 McCOMAS, LLC
 L3918, F.01

GENERAL NOTES

1. THE BEARINGS SHOWN ON THIS SURVEY ARE IN THE MARYLAND COORDINATE SYSTEM NAD 83/91. THE VERTICAL DATUM IS NAVD 88.
2. THIS FIELD RUN TOPOGRAPHIC SURVEY WAS PERFORMED BY PATTON HARRIS RUST AND ASSOCIATES ON OR ABOUT NOVEMBER 14, 2008.

Figure J-2
 McCOMAS STREET
 GROUND SURFACE AFTER CONCRETE REMOVAL

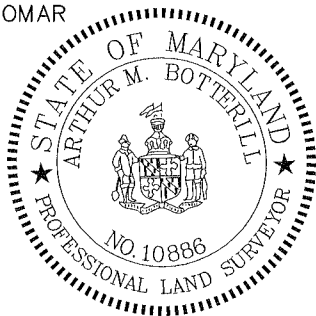


SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS SURVEY IS BASED UPON AVAILABLE LAND RECORDS, AS REFERENCED HEREON, AND WAS PREPARED IN ACCORDANCE WITH THE MARYLAND MINIMUM STANDARDS OF PRACTICE FOR TOPOGRAPHIC SURVEYS (COMAR 09.13.06.04).

Arthur M. Botterill 1/29/09

ARTHUR M. BOTTERILL
PROFESSIONAL LAND SURVEYOR
MD REGISTRATION No. 10886



PROPERTY OF
McCOMAS, LLC
L3918, F.01

GENERAL NOTES

1. THE BEARINGS SHOWN ON THIS SURVEY ARE IN THE MARYLAND COORDINATE SYSTEM NAD 83/91. THE VERTICAL DATUM IS NAVD 88.
2. THIS FIELD RUN TOPOGRAPHIC SURVEY WAS PERFORMED BY PATTON HARRIS RUST AND ASSOCIATES ON OR ABOUT NOVEMBER 14 AND NOVEMBER 17, 2008.

LEGEND

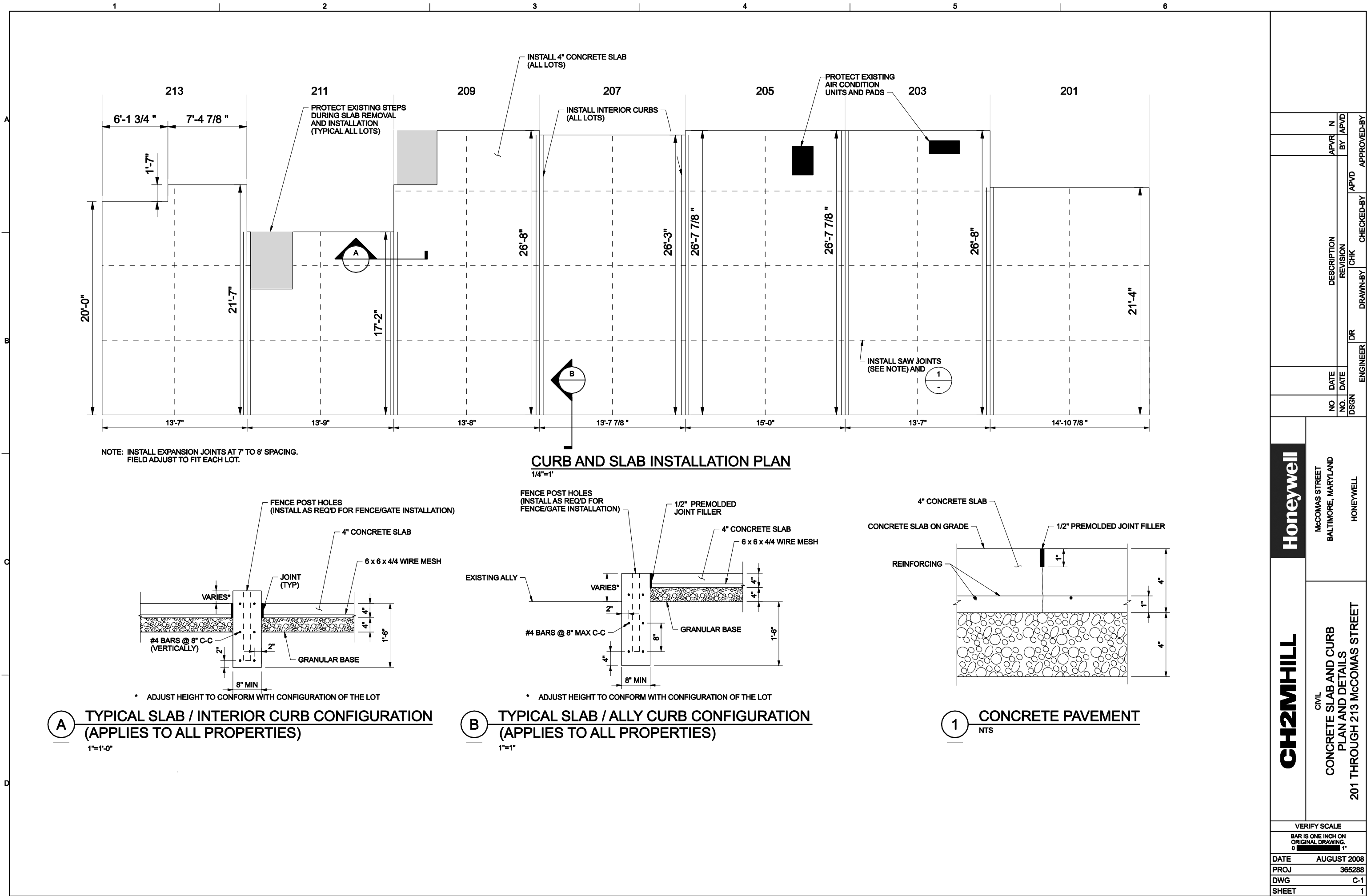
- x 12.00 GND POINTS COLLECTED ON 11/14/08
- x 10.00 D POINTS COLLECTED ON 11/17/08
- D GROUND ELEVATIONS AFTER REMOVAL OF SUBSURFACE SOIL



Figure J-3
McCOMAS STREET
GROUND SURFACE AFTER SOIL REMOVAL

DRAWN: D.D.K.
CHECKED:
DATE: 11-17-08
SCALE: 1"=10'
SHEET 1 OF 1
FILE NO:15986-1-0

Attachment K – Construction Drawings and Specifications



Honeywell

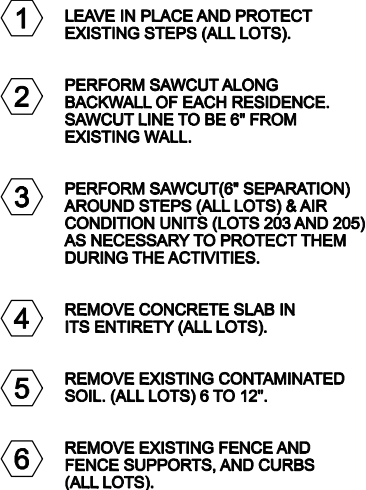
CH2MHILL

McCOMAS STREET
BALTIMORE, MARYLAND

CIVIL
CONCRETE SLAB AND CURB
PLAN AND DETAILS
201 THROUGH 213 McCOMAS STREET

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	AUGUST 2008
PROJ	365288
DWG	C-1
SHEET	1

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL. © CH2M HILL 2004. ALL RIGHTS RESERVED.



1. INSTALL EXPANSION JOINTS AT 7' TO 8' SPACING. FIELD ADJUST TO FIT EACH LOT.
2. FIELD VERIFY ALL DIMENSIONS OF EXISTING WOOD AND CONC STAIR AND ITS LOCATIONS.

1/4"=1'

FILENAME: dn01c200_365288.dgn PLOT DATE: 9/2/2008 PLOT TIME: 6:28:53 PM